

A Comparative Analysis of Teacher Perceptions
Of School Culture in High-Performing and Low-Performing Iowa Schools

by
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A dissertation submitted in partial fulfillment of the requirements for
the degree of Doctor of Education

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2014

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ABSTRACT

The challenge of improving the performance of public schools has been given attention from a variety of advocacy groups, researchers, government agencies, education organizations and schools. Since the reauthorization of the Elementary and Secondary Education Act in 2002, titled No Child Left Behind, the stakes for public schools are higher. Despite this increasing pressure, there are still relatively few examples of schools overcoming the challenges of educating all students and closing the achievement gaps that exist in student subgroups of low socioeconomic status, English language learners, special education, and racial/ethnic minority identification. State departments of education collect a vast array of data to monitor public school performance. In most states, teacher perceptions of school conditions are not among those data; however, teachers matter more to student achievement than any other school factor (Rand, 2012).

This study focused on teacher perceptions of the Nine Characteristics of High-Performing Schools in an effort to determine if teacher perceptions of school culture were predictive of school performance in reading and mathematics. A sequential hierarchical regression analysis indicated that while poverty is a strong predictor of school performance, teacher perceptions of most of the Nine Characteristics of High-Performing Schools is also predictive of school performance in reading and mathematics, a conclusion that has implications for school improvement policy and practices.

CHAPTER 1

INTRODUCTION

There is a well-documented perception that public schools are not effective. Conventional wisdom suggests that students' family background, socio-economic status, ethnicity and race are the best predictors of how they will perform academically. In Iowa, decades of test results indicate that middle-income, Caucasian students perform consistently higher than their peers, despite a number of actions by the Iowa State Legislature and the federal government that have been enacted in the past 30 years to improve school quality and to eradicate the achievement gaps.

In 1988, the Iowa State Legislature passed Iowa Code sections 280.12/280.18, legislation that instituted an accountability system for school districts. Although the legislation did not provide for sanctions, school performance in terms of student achievement was emphasized more than it had been in the past. In the decades preceding the 2002 reauthorization of the Elementary and Secondary Education Act, titled No Child Left Behind (NCLB), student achievement in Iowa showed little change from year to year as measured by the Iowa Tests of Basic Skills (ITBS), the Iowa Tests of Educational Development (ITED), the National Assessment of Educational Progress (NAEP), and the American College Test (ACT). In reading comprehension and mathematics, performance declined at grades 4, 8, and 11 on the ITBS and ITED. There was a slight increase in the average ACT score since 2002.

In the last 10 years, Iowa students demonstrated an increase in proficiency in some areas and a decrease in proficiency in other areas on the ITBS, ITED and Iowa Assessments. The Iowa Assessments are standardized, norm-referenced tests that replaced the ITBS and ITED in 2012.

The Iowa Assessments were an effort by the state to provide an assessment that better aligned with the Iowa Common Core, Iowa's version of the National Common Core Standards.

There has been a small increase in composite ACT scores and a decrease in NAEP reading and mathematics scores. Achievement gaps between Caucasian students and racial minority students and between students in poverty and those that are not persist.

Statement of the Problem

The federal No Child Left Behind Act requires that all schools demonstrate that all students meet state proficiency standards by the year 2014 (Jeffrey, 2002). In Iowa, the number of schools failing to make Adequate Yearly Progress (AYP) has continued to grow since the first twelve schools were labeled Schools In Need of Assistance (SINA) in 2003 (Deeter, 2008). In the 2010-2011 school year, 356 schools in Iowa were identified as SINA (51 in delay status). Despite the increasing rate of identification of SINA across the state, some schools demonstrate progress characteristic of high-performing schools; more schools though, are low performing and are failing to demonstrate sustained progress despite the implementation of required comprehensive school improvement plans.

NCLB heightened the public's awareness of public school performance, called attention to the achievement gaps between Caucasian students and non-Caucasian students; poverty and non-poverty students; special education students and non-special education students; and native English speakers and English Language Learners. It also provided for a series of sanctions for schools failing to make AYP in successive years.

The results of these attempts at system-wide school improvement have not had the intended effect. Despite billions of dollars expended on myriad research-based school

improvement initiatives, many schools continue to fail to demonstrate sustained improvement in student achievement (Boser, 2011; Fabricant, 2011; Kolbe & Rice, 2012; Scafidi, 2012; Taylor, 2006).

Most recently, the state, prompted by the federal government, identified a list of Persistently Lowest-Achieving Schools (PLAS) and organized them into three tiers. Tier One schools were required to either implement one of four federal intervention models or submit evidence that the district lacked the capacity to fully implement one of the intervention models. The intervention models follow (“NCLB persistently lowest-achieving” n.d.):

- Turnaround Model: Replace the principal, screen existing school staff, and rehire no more than half the teachers; adopt a new governance structure; and improve the school through curriculum reform, professional development, extending learning time, and other strategies.
 - Restart Model: Convert a school or close it and re-open it as a charter school or under an education management organization.
- NOTE: Districts selecting the option to operate a charter school must complete the following steps:

First - Demonstrate the support of at least 50% of the teachers employed at the school and 50% of the voting parents or guardians whose children are enrolled at the school.

Second - Complete and submit the School Improvement Grant (SIG) Application to the Iowa Department of Education by May 21, 2010.

Third - Complete the Iowa Application for Charter School Status and submit to the Iowa Department of Education by October 1, 2010.

- School Closure: Close the school and send the students to higher-achieving schools in the district.
- Transformation Model: Replace the principal and improve the school through comprehensive curriculum reform, professional development, extending learning time, and other strategies.

The schools that were first identified as SINA in Iowa tended to have a relatively high percentage of low-income students and a relatively high percentage of racial minorities and, in

many cases, a higher percentage of English language learners (ELL). The trend across the state and across the nation indicates a negative relationship between student achievement and poverty and other external factors that are generally outside the control of the school: poor housing; lack of access to health care; racial and ethnic diversity; presence of learning disabilities; and level of parent education (“Schools and districts in need of assistance,” n.d.).

Some education scholars suggest that not only are these results not surprising, but that they should be expected unless there is mediation of these factors from non-school institutions (Fabricant, 2011; Levin, Belfield, Muennig, & Rouse, 2007; Rothstein, 2000). While the data suggest that schools have a limited effect countering these factors that appear to have a negative impact on student learning but that are outside the direct control of schools, there are a variety of responses to this evidence.

Coleman suggested that poverty is so powerful a determinant that schools can have only an insignificant impact on limiting its deleterious effects (Coleman, Campbell, Hobson, McPartland, Mood, Weinfield, & York, 1966; Rothstein, 2000; Scafidi, 2012). Many others suggest that when correcting for the negative impact of these factors that students affected by these conditions are not performing as poorly as the data suggest (Berliner & Biddle, 1995; Bracey, 2004). Still others have asserted that certain racial groups are genetically inferior and will never reach the high standards of their Caucasian, middle-class peers (Hernstein & Murray, 1994).

A number of other factors have been cited by teachers and administrators to explain poor performance by some students: lack of student effort, poor performance of students’ previous school(s), invalid assessments, unrealistic definition of proficiency, and lack of financial

resources for schools. Certainly these factors do provide challenges for educators; school finance professionals and policy experts recognize that more help is needed to provide equity of educational experience for students that have learning disabilities or come from conditions that place them at a disadvantage relative to their peers (Ferguson, 1991; Greenwald, Hedges, & Laine, 1996).

These reasons offered by educators to explain poor academic performance by their students tend to be, to any practical extent, out of the control of the school system and its teachers and administrators and thus may not lead educators to examine the many factors that they can control. There is a natural tendency to place blame for shortcomings on external conditions rather than engaging in critical self-reflection. According to Evans (1996), it is psychologically safer for teachers to blame poor student achievement on external conditions than to recognize and admit that at least some of the problem lies within the school and the staff that work in it.

A considerable body of research provides evidence that the external factors often used by professional educators to explain low achievement can be overcome by changing the practices of the staff within the school. Education Trust (www.edtrust.org), the National Center for Educational Accountability (www.nc4ea.org), and The Leadership and Learning Center (www.leadandlearn.com), among others, have documented many high-performing schools around the United States that serve predominantly poor, minority students. In Iowa, the percentage of students from poverty and the percentage of non-native English speakers continues to increase (see Table 1.1) and demographic projections indicate that this trend will continue. If Iowa schools are going to successfully serve this increasingly diverse student population,

educators' professional practice must change accordingly. Table 1.1 depicts changes in student demographics in Iowa schools since 1998.

Table 1.1

Changing Demographics in Iowa Public Schools

Academic Year	%age of Students Eligible for Free/Reduced Price Meals	%age of Students Classified as Minority	%age of Students Classified as English Language Learners
1998-1999	27.5	8.6	1.3
2008-2009	34.1	15.4	3.2
2011-2012	40.1	19.3	3.1

(Iowa Department of Education Condition of Education Report 1999, 2009, & 2012)

Several influential organizations are increasing the pressure on schools to find ways to make these changes. While the 42nd Annual Phi Delta Kappa/Gallup poll of the public's attitudes toward the public schools shows that in 2010 77% of America's parents gave their oldest child's school either an "A" or "B" (Bushaw & Lopez, 2010), a study conducted by the Gates Foundation in 2006 found that 72% of the general public believe that the public school system is either in crisis or is experiencing major problems. In the 2010 Phi Delta Kappa/Gallup poll, when asked about the nation's public schools as a whole, only 18% gave a score of an "A" or "B." A number of other non-profit organizations and think-tanks actively advocate for reform of the nation's K-12 education system (e.g., Fordham Foundation: <http://www.fordfoundation.org/>; Education Trust: <http://www.edtrust.org/>; The Hope Foundation: <http://www.hopefoundation.org/>; Achieve, Inc.: <http://www.achieve.org/>). Additionally, the current administration has pursued aggressive changes in federal education policy to promote change.

In February of 2009, President Obama signed into law the American Recovery and Reinvestment Act (ARRA), which provided \$4.35 billion for the Race to the Top Fund. Competitive grants were awarded to states that could demonstrate certain education infrastructure elements, or State Success Factors, with the “absolute priority” of a comprehensive approach to school reform (“United States Department of Education,” 2009). One required reform criterion is turning around the lowest-achieving schools. As early as February 23, 2010, the school board of Central Falls, Rhode Island, voted to fire all 93 of the Central Falls High School professional staff, including 74 classroom teachers, four administrators, guidance counselors, physical education teachers, reading specialists and the school psychologist. Having been identified as a PLAS by the Rhode Island Department of Education, the staff of Central Fall High School and the superintendent could not agree on terms necessary to implement the Transformation Model, so the Board voted in favor of the Turnaround Model. Schools in every state around the country, including fourteen in Iowa, are facing the same decisions (Jordan, 2010).

Whether or not agreement is achieved on the reasons for low performance, political and social pressures are increasing on Iowa’s school systems to improve their performance, regardless of the populations they serve. The Iowa Department of Education and the federal government through No Child Left Behind use a limited set of data to assess how schools are performing. The Iowa Tests of Basic Skills (ITBS) and the Iowa Tests of Educational Development (ITED) were the only measures to determine academic achievement through 2011. In 2012 the ITBS and ITED were replaced by the Iowa Assessments, still the only measure used to assess school performance. The Iowa Assessments, despite being implemented for the purpose of better alignment with the Iowa Common Core, Iowa’s version of the National Common Core

Standards, are still poorly aligned with the Iowa Common Core and, like the ITBS and ITED, are norm-referenced tests not designed to measure student growth. (*Data Recognition Corporation*, 2013).

With no mandated state standards, at least at the time of the passage of NCLB, Iowa did not have a criterion-based measure available to determine school success. Critics of the use of a norm-referenced assessment to measure student progress have a legitimate complaint; however, the trend of schools not making AYP in Iowa mirrors that of other states and the achievement gaps revealed in Iowa's ITBS and ITED scores and now the Iowa Assessment scores reflect those of other assessments, including the NAEP.

Ultimately, if school performance is to improve, whatever the measure for making that determination, more information is needed to inform the improvement initiatives intended to accomplish that goal. Administrators and teachers in struggling schools need to reflect on their practices and identify their relative strengths and weaknesses compared to characteristics of high-performing schools. Using this information, they can identify areas of deficiency in their system and their practice and create more specific, targeted plans for improvement. A shift must be made from creating plans based only on the previous year's student achievement data (effect data) by adding the collection and analysis of cause data, i.e., teacher practices and teacher perceptions (Blankstein, 2010).

In 2003 (with an updated version produced in 2007), the Washington State Office of Superintendent of Public Instruction (OSPI), published a report that summarized the most recent research about schools of all types that had closed the achievement gap. The report synthesized several decades of research on effective schools to produce a set of common characteristics for

high-performing schools, titled *Nine Characteristics of High Performing Schools*. The nine characteristics offer a useful reference for administrators and teachers to assess their practice against those common to high-performing schools (Shannon & Bylsma, 2003).

Nine Characteristics of High Performing Schools

- Clear and Shared Focus
- High Standards and Expectations for All Students
- Effective School Leadership
- High Levels of Collaboration and Communication
- Curriculum, Instruction, and Assessment Aligned with Standards
- Frequent Monitoring of Learning and Teaching
- Focused Professional Development
- Supportive Learning Environment
- High Levels of Family and Community Involvement

The Center for Educational Effectiveness (CEE) has been deeply involved in contributing to the school improvement efforts in northwest United States, particularly in the state of Washington. Founded in 2002, the CEE works with education agencies and organizations to provide data services and support for school and district improvement planning.

The CEE has contributed to the research base establishing the Nine Characteristics of High Performing Schools. Its surveys for staff, students and parents, which are the foundation of their work, are designed to measure perceptions of the Nine Characteristics of High Performing Schools for use in informing school improvement efforts. The CEE partners with over 800 schools and 135 school districts. The Office of the Superintendent of Public Instruction for Washington relies on the CEE for determining the criteria and the determination of its Schools of

Distinction recognition, awarded annually to schools in the top five percent of schools demonstrating improvement.

Many states, including the state of Washington, require schools to engage staff, students, and families in a self-assessment process to inform their school improvement planning. Multiple surveys have been developed by a variety of institutions that align with these nine characteristics. The purpose of the surveys is to collect data on the perceptions of staff, students, and families on the elements of effective schools that are within the control of the education system. Schools then use these data to identify areas for improvement that cannot be identified from analyzing student test scores alone. Iowa schools do not have a systematic way to collect this type of cause data to inform their school improvement efforts.

Purpose of the Study

The purpose of this study was to help identify the differences between staff perceptions in low-performing and high-performing Iowa schools and explore the utility of Iowa schools systematically collecting teacher perception data to inform their school improvement efforts.

Research Questions

The following research questions guided this study:

1. What are the descriptive data for the Iowa participants in the dataset?
2. To what extent is there a difference between high-performing and low-performing schools for each of the Nine Characteristics of High-Performing Schools?

3. To what extent do socioeconomic status and the Nine Characteristics of High-Performing Schools predict school performance for a) reading proficiency, and b) mathematics proficiency?

With relatively flat trends in school performance for the past decade, there is a need for more information to inform school improvement efforts. The state of Iowa collects a very limited set of student achievement data and there is a complete absence of stakeholder perception data to inform school improvement efforts. There is a need in the state to better identify school performance and to collect data that are useful to school districts in formulating school improvement plans. Better and more complete data from schools is also necessary to inform policy decisions by the state legislature and the department of education.

Although perceptions of students and parents and other staff are important, in order to manage the scope of this study, the researcher opted to collect only teacher perceptions. The population of teachers at each subject school was more easily defined and more readily accessible. Further, the research is clear that the teacher is the single most influential factor in school improvement efforts (Hattie, 2009). Teacher perception data can be effectively used by school leaders to inform ongoing changes in school improvement efforts in a manner responsive to teachers' expressed needs.

Significance of Study

The percentage of students in Iowa schools that live in poverty, that do not speak English as their first language, and that belong to a racial or ethnic minority – subgroups identified as having consistent achievement gaps – is growing. Improvement in overall student achievement in Iowa schools is relatively flat over the past decade (*Iowa Department of Education, 2012*).

The need for a skilled workforce in the state is increasing. While the unemployment rate in the state decreases the number of students in the K-12 system also continues to decrease (*Iowa Workforce Development*, 2013).

To meet the needs of a growing workforce and to lift more families out of poverty, Iowa's K-12 public education system needs to improve. Student achievement trends over the past ten years and student demographic changes over the past ten years demonstrate that the road to improvement must look different from the past. This study will provide to educators and policy makers a new approach for finding the critical leverage points for improving academic achievement in Iowa's schools.

Definitions of Key Terms and Acronyms

ACT – American College Testing

ARRA – American Recovery and Reinvestment Act of 2009

AYP – Adequate Yearly Progress

CEE – Center for Educational Effectiveness

ELL – English Language Learner

HP2 – High Performing, High Poverty

Iowa Assessments – Norm-referenced, standardized tests used by the state of Iowa to measure student achievement in mathematics and reading. In 2012, the Iowa Assessments replaced the ITBS and the ITED

IPDM – Iowa Professional Development Model

ITBS – Iowa Tests of Basic Skills

ITED – Iowa Tests of Educational Development

NAEP – National Assessment of Educational Progress

NCLB – No Child Left Behind

PLAS – Persistently Lowest Achieving School

PLC – Professional Learning Community

SES – Socioeconomic status

SIG – School Improvement Grant

SINA – School In Need of Assistance

What Works Clearinghouse – A resource for informed education decision-making, established in 2002 as an initiative of the Institute of Education Sciences at the U.S. Department of Education.

Summary

This study sought to understand the differences in teacher perceptions of school culture as defined by the Nine Characteristics of High-Performing Schools and to determine the relationship between teacher perception of school culture and student performance in reading and mathematics. Understanding the relative importance of teacher perception of the Nine Characteristics of High-Performing Schools and its relationship to student performance can

provide useful information to school leaders in determining where improvement efforts can best be focused to improve student learning results.

Chapter 2 provides a review of the research and literature that forms the foundation for this study. Chapter 3 outlines the quantitative research methodology employed in this study. This chapter includes a descriptive analysis of the subjects included; a description and explanation of the variables used in the analysis; a description of the data collection instrument; and a description of the data analyses and study limitations. Chapter 4 addresses the results of the data analysis: descriptive, correlation, and regression data results are discussed. Chapter 5 provides a summary of the study results and a conclusion based on the contents of the previous chapter. Finally, policy implications and suggested further research are discussed.

CHAPTER 2

LITERATURE REVIEW

There is a plethora of research on change in organizations from virtually every field of professional practice. Dr. Edwards W. Deming, considered the father of total quality management, was largely ignored in the United States until Japanese companies, particularly the auto industry, found unimagined success by following his fourteen principles (Deming, 1982). In the years since his ideas took hold in the U.S. business world in the mid-1980s, leaders in the business field and then in education, began to apply quality management principles to schools. Stemming largely from Deming's work, Senge, in *The Fifth Discipline*, and others emphasized the value of organizational development, the learning organization, and continuous improvement as the hallmarks of quality organizations (Schargel, 1994; Schlechty, 1997; Senge, 1990).

Recently, Senge focused much of his work on schools as organizations (Senge, Kleiner, Roberts, Ross, Roth, & Smith, 1999; Senge, McCabe, Lucas, Kleiner, Dutton, & Smith, 2000). Fullan (2010), Hargreaves & Shirley (2009), and others have written extensively about organizational change from a school perspective. Organizational improvement in schools, as well as in other organizations, requires four elements: change in attitudes, change in beliefs, change in intention, and change in behaviors (Fishbein & Ajzen, 1975; Guerra & Nelson, 2005). The Iowa Department of Education has drawn on the expertise of Bernhardt, Calhoun, and Joyce and Showers in developing the Iowa Professional Development Model (IPDM) to provide assistance to schools in addressing changes in behavior and changes in practice (*Iowa Professional Development*, 2005). The cyclical nature of the model mirrors Deming's principle of continuous improvement.

When implemented with fidelity, this model-and many others like it- provide school leaders with a system for informing teachers' practice and designing professional development to create change for improved student results. The IPDM, and other models of professional development relied upon in so many comprehensive school improvement plans, does not take into account change in attitudes and change in beliefs, the two other core elements requisite for true organizational improvement.

In a 2004 article titled "Professional Development: A Great Way to Avoid Change," Cole (as cited in Fullan, 2010) explained that what makes a true difference in workplace change is what happens between professional development sessions. "Professional development sessions, walk-throughs, and site visits to other organizations can be valuable input, but you can't get 'depth by visitation'" (p. 52). He suggested that the only way to get depth is "at home through learning in the setting in which you work" (p. 53). As Fullan characterized it, "Learning is the work" (Fullan, 2010, p. 53).

One key challenge in changing teacher practices in the classroom to achieve intended results is to identify the changes needed and to make those identifications based not only on student achievement or other effect data, but also on the collective conviction of those that need to make the change. Organizations that become great do so in large part because they "confront the most brutal facts" (Collins, 2001, p. 73).

DuFour, Eaker, DuFour and Karhanek have asserted in their work on developing professional learning communities that "it is possible to help more students succeed at higher levels than ever before if we are willing to change many of our assumptions and practices" (DuFour et al., 2004, p. 27). Professional Learning Communities (PLCs), as defined by DuFour,

et al. (2004), emphasize four core questions, each with the underlying assumption of collective responsibility for results (Eaker, Dufour, & Dufour, 2002):

1. Does every teacher understand what each student should know and be able to do after completing the unit of instruction, course, and grade level?
2. What systems are in place to monitor each student's learning on a timely basis?
3. What happens when a student is not learning? How does the school respond?
4. What systems are in place to provide these students with additional time and support?

These core questions provide a logical way to organize professional learning and develop a learning organization. However, the authors admit that no system of intervention can overcome poor teaching. Other forces are needed to address changes in beliefs and attitudes. Another element necessary for organizational change, according to Kotter (1996), is the creation of a sense of urgency. External forces, both formal and informal, may create the necessary sense of urgency: perception by parents or other stakeholders; negative portrayals in the media; school board policy; and state and federal policy. Internal forces may also contribute to creating pressure for change, such as evaluation systems and compensation. Perhaps the most effective source of pressure for change stems from collective dissatisfaction among staff. The more sources and the higher the intensity of the pressure the faster the change is likely to occur (Graczewski, Knudson, & Holtzman, 2009; Fullan, 2010; Kotter, 1996; Senge, 1990).

A study conducted in the Hartford County Public Schools in Maryland found that teacher perception of collective efficacy among their same school colleagues was positively correlated with student achievement in reading. Two variables, previous year's achievement and teachers' perception of collective efficacy, were significant predictors of reading scores in the district's elementary schools. Additionally, when controlling for conditions of poverty, "collective

efficacy perceptions contributed substantially to mathematics achievement” (Mawhinney, Haas, & Wood, 2005, p. 25).

In his 2008 study, Bylsma examined the degree to which staff in a wide range of schools perceived their schools as having the characteristics of high-performing schools. A majority of respondents, regardless of school performance, rated their schools on the higher end of the rating scale. Although results varied with school size and grade levels served, some significant findings were established. At the middle and elementary levels, teachers at schools with high-poverty student populations tended to rate themselves lower in terms of the characteristics of high-performing schools. When adjusted for poverty, staff perceptions at the elementary and middle level increased as the school’s results on the state assessment improved.

While PLCs have been shown to be effective in moving student achievement forward relying primarily on hard student data in the form of assessment scores and attendance rates, Hargreaves and Shirley (2009) asserted that the most effective teacher groups are also committed to:

- Transforming the learning that is responsible for results;
- Valuing each other as people in relationships of care, respect, and challenge; and
- Using quantifiable evidence and shared experience to inquire into teaching and learning issues and make judgments about how to improve them.

Successful school turnaround examples can be found in pockets around the country. The practices associated with these successful efforts at transforming high-poverty, low-performing schools are well documented (Blankstein, 2010; Fielding, Kerr, & Rosier, 2004; McGee, 2004; Roney, Brown, & Anfara, 2004). The question that remains unanswered is why all low-performing schools have not, or are not able to, adopt these practices successfully.

Kruger and Dunning (1999) and others described the four stages of learning as unconscious incompetence, conscious incompetence, conscious competence, and unconscious competence. Although several factors can influence teachers' assessments of their collective efficacy and the quality of the schools in which they work, teacher perception of school quality, when compared with student achievement data can provide for a means of identifying which stage of learning a school's staff is operating. Bylsma (2008) argued that:

The development and ongoing implementation of an improvement strategy can be compromised, perhaps fatally, if staff does not have realistic perceptions about the quality of their school. When educators do not have realistic perceptions of their conditions, they are less likely to see a need for change, and therefore unlikely to make progress without an objective and clear-headed appraisal of what is happening in the school (p. 34).

Without taking into account teacher perceptions of school conditions and school quality, low-performing schools attempting to implement best practices to turn around performance are especially at great risk of failing to see their goals realized.

Myriad studies have determined that high-performing schools share characteristics. The various characteristics can be described in a number of ways and no single characteristic is more or less important than the others. This study utilized the Nine Characteristics of High-Performing Schools as defined by the Washington State Office of the Superintendent of Public Instruction:

- Clear and Shared Focus
- High Standards and Expectations for All Students
- Effective School Leadership
- High Levels of Collaboration and Communication
- Curriculum, Instruction, and Assessment Aligned with Standards
- Frequent Monitoring of Learning and Teaching
- Focused Professional Development

- Supportive Learning Environment
- High Levels of Family and Community Involvement

The nine characteristics are not listed in order of importance and the research supporting each is not independent of the others. The individual characteristics should not be considered to be mutually exclusive of the others in the list. In the following pages, research underpinning each of the nine characteristics of high-performing schools is reviewed.

Clear and Shared Focus

In a study of high-performing, high poverty schools (HP2), Bell (2001) identified “Focus on delivery of high-quality teaching and learning for all students” (p. 10) as one of fourteen characteristics common to all HP2 schools. Schmoker (2011) synthesized the concept of a clear and shared focus as it relates to school improvement, “The general underperformance of schools can be directly attributed to a failure to implement three simple, well-known elements: a common curriculum, sound lessons, and authentic literacy” (p. 9).

Collins (2001) illustrated the importance of a clear and shared focus as one of the key principles of organizations moving from good to great. Examples from multiple successful organizations demonstrated the need for a relatively narrow focus, shared purpose, and a willingness to abandon activities that did not clearly align with that focus.

Although a clear and shared focus at the school level is well supported in research, Jensen (2009) described the need for focus at the classroom level. Learning objectives must be broken down into specific, daily objectives that can be clearly understood by students so that the teacher and students share a clear focus on the desired lesson outcomes. As characterized by Schmoker,

“The introduction of specific, measureable goals is among the most promising yet underused strategies we can introduce into school improvement efforts” (Schmoker, 1999, p.22).

High Standards and Expectations for All Students

Multiple studies identify the importance of high standards for students as a necessary element for high performing schools. Teacher expectations of students may be impacted by a variety of factors: race, ethnicity, family income level, behavior, gender, and past performance. Teacher expectations, whether conscious or unconscious, may cause differentiated behavior toward students, such as: less or less positive feedback; less response time; lower expectations for work quality and assignment completion (Bell, 2001; Clark & Cookson, 2012; Jensen, 2009; McGee, 2004; Pringle, Lyons, & Booker, 2010; “National Board,” 2012; Van den Bergh, Denessen, Hornstra, Voeten, & Holland, 2010).

The need for high expectations appears to be particularly important for students of ethnic and racial minority groups. Teacher differential treatment of ethnically diverse students has been shown to have a statistically significant effect on the overall achievement gap (“National Board,” 2012). In classrooms where teachers held implicit negative attitudes toward certain ethnic groups, students from those ethnic groups performed poorly compared to their peers in other classrooms. Further, the achievement gap between minority and nonminority students was significantly larger in classrooms where teachers held negative attitudes toward the minority students (Van den Bergh, et al., 2010).

Among the fourteen themes identified as common among HP2 schools is “An emphasis on hard work, high expectations and persistence” (Bell, 2001, p. 10). McGee (2004) identified

high expectations as a common element of schools successful in closing the achievement gap. On a broader scale, Clark and Cookson (2012) found that states with high state standards in reading and mathematics outperformed states with comparatively low standards on the NAEP assessments for both 4th grade and 8th grade as measured by a reduction in the percentage of students scoring at the below basic level.

Teachers must have positive conceptions about progress, relationships and students. Teachers must believe that their role is that of a change agent; that all students can learn; that achievement is changeable. Teachers must understand that demonstrating to all students that they care about their learning is effective in changing student outcomes (Hattie, 2009).

Effective School Leadership

The body of research that supports school leadership as an impactful factor on student achievement and school quality is substantial. Marzano, Waters, and McNulty (2005) studied school leadership as practiced by principals. In a meta-analysis of 69 studies conducted from 1978 through 2001, they found a .25 correlation between general leadership behavior and student academic achievement. Marzano, et al. use the term correlation to indicate effect size. A .25 correlation is higher than many other school improvement factors, such as class size, effect size .21; co-/team teaching, effect size .19; teacher subject matter knowledge, effect size .09 (Hattie, 2009).

Table 2.1 presents a hypothetical but accurate interpretation of the average correlation between principal leadership and student academic achievement. The figure demonstrates that statistically, 62.5% of schools whose principals ranked in the top half of all principals for leadership behavior would receive a passing grade whereas 62.5% of schools for which the

principals ranked in the bottom half for leadership behavior would fail. Further, principal leadership behavior from the 50th percentile to the 84th percentile is associated with a gain in student achievement in the school from the 50th percentile to the 60th percentile. An increase in school level student achievement from the 50th percentile to the 72nd percentile is associated with an increase of principal leadership behavior from the 50th percentile to the 99th percentile (Marzano, et al., 2005).

Table 2.1

Interpretation of a Correlation of .25 in Terms of Expected Passing Rates for Schools, Depending on Leadership Effectiveness

Leadership Effectiveness	%age of Schools Passing the Test	%age of Schools Failing the Test
Schools with Principals Rated in the Top Half of All Principals	62.5	37.5
Schools with Principals Rated in the Bottom Half of All Principals	37.5	62.5

Marzano, et al. (2005), p.31

The relationship of leadership to student achievement is indirect since teachers, not principals, provide direct instruction to students. (Figure 2.1) Dufour & Marzano (2011) depicted the relationship between principal leadership behavior and student achievement as a tiered set of actions with principal actions directly impacting teacher classroom behavior that then affects student learning.

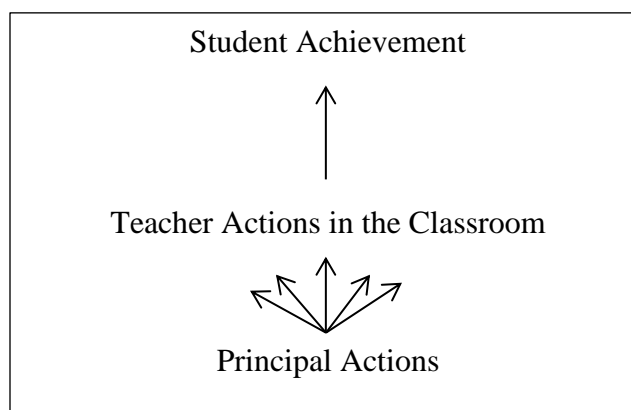


Figure 2.1. Relationship Between Principal Behavior and Student Achievement

Dufour & Marzano (2011), p.49

There are multiple principal actions impacting teachers. However, principals' actions are removed at least one degree from classroom actions because of two primary constraints: limited tools for directly influencing the behaviors of isolated classroom teachers and the inability of one person to possess the knowledge, skills or energy to simultaneously fulfill the identified twenty-one different principal responsibilities that have a positive influence on teacher behavior (Marzano, et al., 2005).

Robinson and Timperley (2007) synthesized these multiple behaviors of leadership into five dimensions of leadership that impact student achievement:

1. Providing educational direction/goal setting
2. Ensuring strategic alignment
3. Creating a community for improved student success
4. Engaging in constructive problem talk
5. Selecting and developing smart tools

These behaviors are most impactful when the principal's actions are not just coherent to the teachers but are coherent as well with what the students know and how they learn.

Reeves (2006) summarized the research of effective school leadership with two assertions:

- 1) Leadership, teaching, and adult actions matter; and
- 2) There are particular leadership actions that show demonstrable links to improved student achievement and educational equity. (p.xxiii).

Hattie (2009) stated that of the many types of principal leadership, transformational and instructional have a positive impact on student achievement, with educational leadership having a more powerful effect. “It is school leaders who promote challenging goals, and then establish safe environments for teachers to critique, question, and support other teachers to reach these goals together that have most effect on student outcomes” (p.83).

High Levels of Collaboration and Communication

High levels of collaboration and communication are evidenced as characteristics of effective schools by numerous scholars in studies of effective PLCs; high-poverty, high-performing schools; and effective schools at the elementary, middle and high school level. Traits that indicate high levels of collaboration and communication include: use of strategies that “‘open’ practice in ways that encourage sharing, reflecting, and taking the risks necessary to change” (Vescio, Ross, & Adams, 2008, p. 84); an intentional focus on building relationships among adults; collaborative scoring of student work; time provided for structured collaboration around student progress; interdependency between collaboration and student achievement; collaborative decision-making; and continuous teacher learning (DuFour, et al., 2010; Jensen, 2009; Levine & Marcus, 2007; Reeves, 2004; Schmoker, 1999; Styron & Nyman, 2008; Valentine, 2006; Vescio, et al., 2008).

A national study of highly successful middle schools found that a collaborative and communicative school culture was one element that all schools shared. Valentine (2006) reported that these highly successful schools shared the following characteristics:

- Principals viewed themselves as collaborative leaders, as did their teachers. They fostered collegiality and the opportunity for collaborative work among teachers centered on curriculum, instruction, and assessment.
 - Teachers were also strongly committed to collaboration, fulfilling school-wide roles as decision-makers, coordinators of professional development, and leaders in the efforts to improve classroom instruction across the whole school.
 - School structures, such as student and adult schedules and physical arrangements of classrooms, were designed to foster collaboration and relationship building among students-teachers, students-students, and teachers-teachers.
 - Principals and teachers indicated that building “relationships” among adults was a major factor in creating their effective school cultures, with principals and teachers regularly discussing the importance of relationships and the part relationships play in the difficult decision-making, problem-solving tasks that a faculty/staff must address.
- (p. 2)

Vescio, et al. (2008), in a review of professional learning communities research, highlighted collaboration as the first of four elements that positively impact a PLC’s impact on school culture. Among the practices that indicate effective PLCs are a number of teacher and leader collaboration activities (e.g. sharing lessons, use of decision-making protocols, classroom observation by peers, videotaping and reviewing lessons, literature study groups, critical friends groups) that improve teacher professional practice, morale and reduce isolationism. In addition to a focus on student learning, teacher authority, and continuous learning, collaborative activity leads to the “deprivitization” of teachers’ professional practice.

Conversely, when teachers are not encouraged or allowed time and structures within which to collaborate, opportunities for contextual professional learning will be limited. Not only does this limit opportunities for teachers to respond and differentiate flexibly to specific contexts and student challenges, it may “drive out the most thoughtful and creative professionals and prevent teachers from, or valuing, new approaches” (Levine & Marcus, 2007, p. 136).

Curriculum, Instruction, and Assessment Aligned with Standards

The instructional process includes three primary components: curriculum, instruction, and assessment. A literature review conducted by the Appalachia Educational Laboratory (2005) found “strong evidence from scientifically based research that aligning the various components can have positive and significant effects” (p. 5). Assuming shared learning targets, or standards, when teachers employ curriculum aligned to those standards; provide instruction that is aligned with the standards; and measure student results with assessments aligned to the standards, student learning is positively impacted.

Marzano (2003) identified the most important school level factor impacting student achievement as a guaranteed and viable curriculum. In addition to clear district and state guidance on content targets, Marzano recommended another level of alignment: opportunity to learn, or time. Not only must instruction be aligned with the curriculum, instructional time must be aligned with the complexity and difficulty of the learning targets.

Figure 2.2 displays a vertical standards alignment process from Martineau, Paek, Keene, & Hirsch (2007), starting with the first level that a content standard is introduced, applying a five-step analysis developed by Wise (2004):

1. What content is new or continued?
2. What broadening of knowledge and skills is represented?
3. What deepening of knowledge and skills is represented?
4. How does content emphasis vary across grades?
5. What needs to be clarified about the standards?

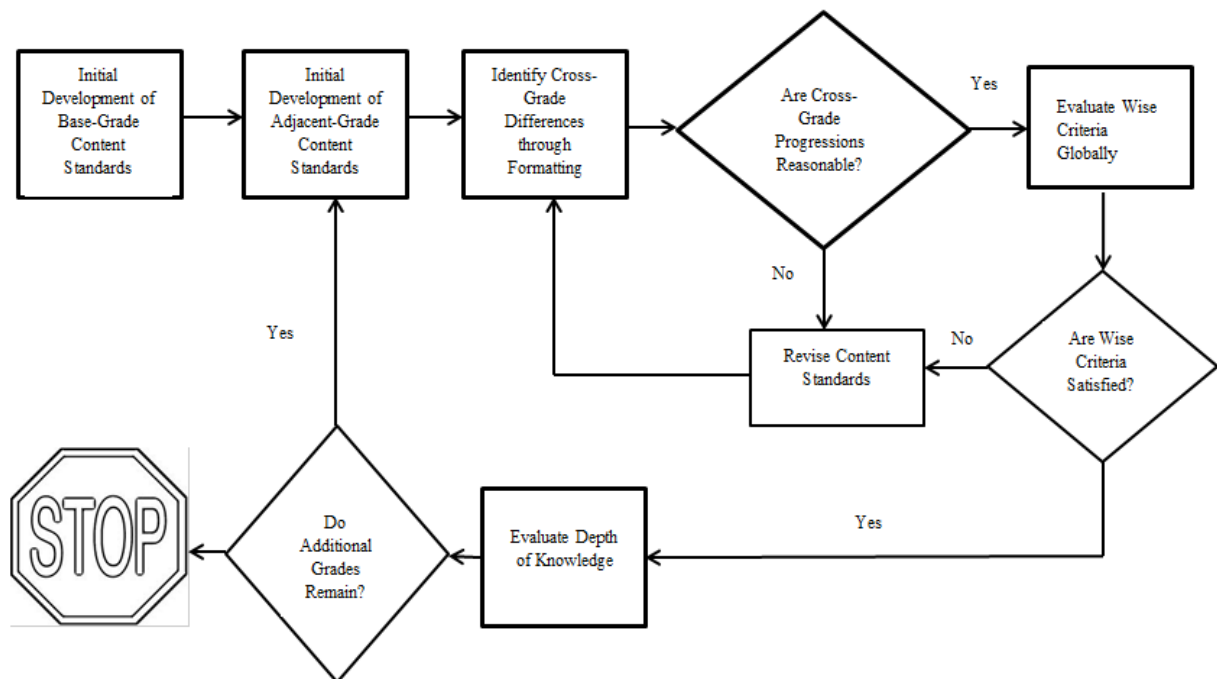


Figure 2.2. Content Standard Alignment Process

Martineau, et al. (2007)

A variety of models to align curriculum exist, most of which contain the same key elements: content standards, grade-to grade or level-to-level progressions of those standards, and some measure of emphasis, scope and depth for each standard by grade level or course.

For the alignment of curriculum and instruction to produce the desired results, the assessment component must be aligned. Wraga (1999) recommended that school districts “establish and maintain substantive evaluation programs as a component of the local curriculum development process” (p. 24). The evaluation program should be developed in conjunction with and be closely related to the curriculum and instruction components (Reeves, 2004; Wraga, 1999).

Frequent Monitoring of Teaching and Learning

The importance of frequent monitoring of student learning and providing meaningful feedback from formative assessment is well established in the research as sound instructional best practice. Farias, Farias, & Fairfield (2010) recommended that teachers request feedback from students on a formal basis, weekly if possible, and that the feedback be processed and shared with the class. This formal feedback loop reinforces the classroom as a collaborative environment where both students and teacher are learners. Further, providing “rich and constructive feedback” (p. 340) can help to clarify the learning standards and underscore the fact that the students are capable of reaching them.

Among the nine research-based strategies advanced by Marzano, Pickering, & Pollack (2001) as effective teacher practices is Setting Objectives and Providing Feedback. To accomplish this strategy effectively requires teachers to frequently monitor student learning. Learning goals should be set by the teacher in a manner that allows enough flexibility for

students to personalize them. The feedback provided to students should be corrective in nature, timely, specific to established criteria, and, when practicable, provided by students as well as from the teacher. In the second edition of the meta-analysis on research-based strategies first published in 2001, Setting Objectives and Providing Feedback moved to the top of the list of the nine strategies (Dean, Hubbell, Pitler, & Stone, 2012).

Zemelman, Daniels, and Hyde (1998) found that frequent monitoring of student learning should be formative in nature and that feedback provided to students should favor description and narration over numerical and scored. Further, students should be involved in judging and tracking their own learning. Beyond teacher monitoring of student performance, Schmoker (2011) illustrated the importance of frequent monitoring of teacher performance by regular classroom walkthroughs reinforced by quarterly discussions of student performance and teacher peer observations.

Focused Professional Development

In a review of more than 1,300 studies addressing the effect of teacher professional development on student achievement, Yoon, Duncan, Lee, Scarloss, & Shapley (2007) found that studies that meet the What Works Clearinghouse evidence standards may increase student achievement by as much as 21 percentile points. Figure 2.3 depicts the interactive relationship among professional development, teacher knowledge and skills, classroom practice, student achievement and curriculum.

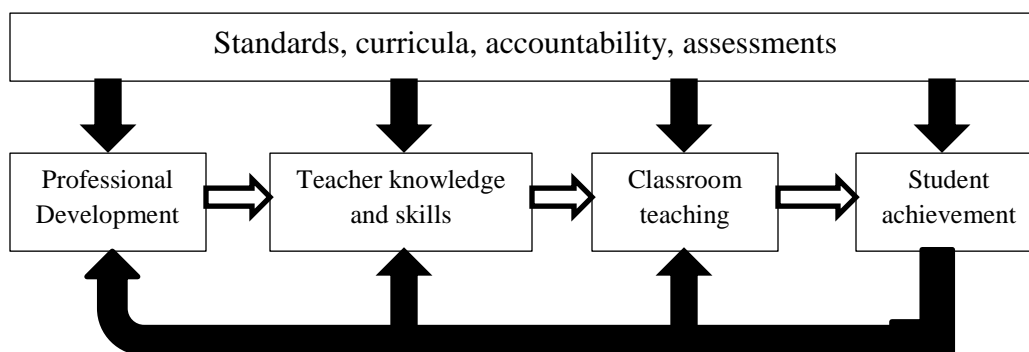


Figure 2.3. How Professional Development Affects Student Achievement

(Yoon et al., 2007, p. 4)

To achieve quality in terms of student achievement gains, professional development must have a clear theory of action, planning, design and implementation; and teachers must possess the motivation, belief and skills to apply their new learning as part of their classroom practice, supported by ongoing consultation and collaboration opportunities (Joyce & Showers, 2003; Marzano, 2010; Yoon et al., 2007).

Historically, models of professional development for teachers have been developed in academia and applied to the K-12 setting. With a focus on knowledge and skills determined by university researchers to be effective instructional practice, traditional professional development approaches have not incorporated existing teacher expertise and the unique factors encountered in each classroom as a result of the student population being served. The focused professional development that has demonstrated a measureable effect on student learning is quite different from the traditional model. A model that honors teachers' knowledge of their particular classroom and student needs and uses student data and learning goals as the center of the professional development is more effective (Desimone, 2009; Smith & Rowley, 2005; Styron & Nyman, 2008; Vescio, et al., 2008). The elements of Professional Learning Communities

(PLCs), as conceptualized by DuFour, et al., (2004, 2005, 2010), are present in professional development that has been linked to improved student academic achievement, though how the PLCs are structured and organized can vary widely by school level and the focus of the professional development initiative (Harris & Sass, 2011; Smith & Rowley, 2005).

Supportive Learning Environment

In a study of 18 high-performing, high poverty schools, James, Connolly, Dunning, and Elliot (2008) determined that in addition to a clear focus on learning and a high level of engagement with their communities, “All the schools were highly inclusive in the way they worked” (p. 73). The supportive environment found in the schools shared several common characteristics: an empowered and proactive optimism; a highly reflective approach; an “accept-and-improve” outlook; a “both-and” attitude; very high aspirations, ideals, and expectations; a willingness to praise; a caring attitude; and pride in the school (James, et al., 2008).

Echoing this work, Wang and Holcombe (2010) suggested that school environment supports multiple types of student engagement: behavioral (school participation), emotional (school identification), and cognitive (use of self-regulation strategies). Students’ perceptions of distinct dimensions of the school environment contribute to each of the three types of engagement. Students demonstrate higher identification with their school and a willingness to participate in learning activities when teachers offer positive, improvement-based feedback that emphasizes effort over correct answers. Further, when students do not fear being negatively compared with other students and when their individual efforts and abilities are recognized, they are more likely to employ cognitive strategies that improve learning (Wang & Holcombe, 2010).

Farias, et al. (2010) asserted that transformational teachers, regardless of style, “create a great learning environment,” “They are committed to making a difference and demonstrate a willingness and commitment to challenge ordinary students to do extraordinary things” (p. 336-337). Success in creating a supportive learning environment is determined in large part by teachers’ abilities to align students’ learning orientations to their own. A supportive learning environment is accomplished in part by a focus on learning over grades. In Figure 2.5, quadrant 1 represents the ideal alignment, while quadrant 4 represents alignment that is detrimental to a supportive learning environment. Quadrant 2 describes an environment with a teacher orientation toward learning and a student orientation toward grades, while Quadrant 3 describes a teacher orientation toward evaluation and a student orientation toward learning. Both quadrants 2 and 3 represent a misalignment that is not optimal for student learning outcomes.

Figure 2.4 illustrates the classroom conditions that result from a teacher orientation toward learning or evaluation when combined with a student orientation toward learning or grading.

Teacher Orientation	Learning	Alignment Partnership in Learning Mutual Support Developmental Feedback Grades are leverage for learning Transformational 1	Low potential for alignment Developmental (teacher); student just wants a grade Developmental feedback attempted; student does not pay attention 2
	Evaluation	Low potential for alignment 3 Hierarchical (teacher); student hopes for development Feedback through final grades Transactional	4 Alignment Hierarchical Grades are judgmental; student does not see beyond the grade Transactional
		Learning	Grade
Student Orientation			

Figure 2.4. Student and Teacher Orientations to Learning

(Farias et.al., 2010, p. 339)

Accordingly, Danielson (2010) asserted that “To the extent the school environment allows students to experience satisfaction of these needs (relatedness, competence and autonomy), the students’ self-regulated motivation will be optimal.” (p. 33). Further, these conditions are likely to increase students’ academic initiative, increasing the likelihood that students will reach their individual potentials.

High Levels of Family and Community Involvement

One conclusion drawn by McGee (2004) in his study of Illinois high-poverty, high-performing schools was that parents were made to feel welcome. A priority in these schools is actively and frequently communicating expectations for parents in a positive manner. Schools also provide opportunities for parents to improve their literacy and parenting skills.

Evidence suggests that parental involvement has a positive impact on both student and teacher motivation. Gonazalez-DeHass, Willems, & Holbein (2005) found that parental involvement boosts students' perceived control and competence, creates a sense of security and connectedness, and promotes students' internalization of educational values. Jeynes (2005) found that there is "a considerable and consistent relationship between parental involvement and academic achievement among urban students" (p. 258). The positive relationship was consistent for both male and female students as well as for students of racial minority identification. Additionally, it was found that the impact of parental involvement on student academic achievement transcends student differences in socio-economic factors. The positive effect of parental involvement was found in multiple measures of student academic achievement: grade point average, standardized tests, and other local measures.

Hickman (2006) found that both home-based and school-based parent involvement activities produce a positive variance in student achievement. The positive impact of parental involvement in both home-based and school-based strategies holds from early-childhood through high school. Hill & Tyson (2009) and McNeal (1999) recognized that although effective parental engagement takes different forms at different grade levels and that though the impacts of various strategies vary, parental involvement has a positive relationship to student achievement. Parental

effect on student outcomes is most associated with the encouragement and expectations that they communicate to their children. “Parental expectations are far more powerful than many of the structural factors of the home (e.g., single or two-parent families, families with resident or non-resident fathers, divorced parents, adopted or non-adopted children, or only children and non-only children). It is not so much the structure of the family but rather the beliefs and expectations of the adults in the home that contributes most to achievement” (Hattie, 2009, p. 71).

Summary

The research that supports the Nine Characteristics of High Performing Schools is extensive. The perception of teachers and others of the Nine Characteristics of High Performing Schools in their schools has been utilized in Washington and elsewhere as an important element of school improvement efforts. This study attempted to assess the differences in perceptions of the Nine Characteristics of High Performing Schools between teachers in high performing and low performing schools in Iowa. In light of relatively flat growth in overall student achievement levels in Iowa over the past decade, there may be a meaningful opportunity for utilizing teacher perceptions of school culture to inform school improvement efforts in Iowa to accelerate growth in student achievement and school effectiveness.

CHAPTER 3

METHODOLOGY

The purpose of this study was to understand how Iowa educators perceive their schools and determine if there is a relationship between teacher perceptions of their school and their school's performance. To make this determination, the researcher identified a sample of high-performing schools and low-performing schools at the elementary, middle and high school levels.

Given the relatively narrow data on student achievement (percent proficient in reading and mathematics on the Iowa Tests of Basic Skills at elementary and middle schools and the Iowa Tests of Educational Development at high schools) used by the state of Iowa to determine school effectiveness and the relatively flat trajectory of student achievement in the state, the researcher endeavored to gather data that are not currently gathered from Iowa schools in an effort to identify leverage points for accelerating improvement.

This chapter contains the three research questions that guided the study, a description of the research design, research methodology, research setting, characteristics of the populations included in the sample, data collection procedure, instrumentation, variables, and approach to data analysis.

Research Questions

The following research questions guided this study:

1. What are the descriptive data for the Iowa participants in the dataset?

2. To what extent is there a difference between high-performing and low-performing schools for each of the nine characteristics of high-performing schools?
3. To what extent do socioeconomic status and the nine characteristics of high-performing schools predict school performance for a) reading proficiency, and b) mathematics proficiency?

These questions were addressed by gathering survey information from teachers. A purposeful sampling approach was used in order to collect comparative data for both high-performing and low-performing Iowa elementary, middle, and high schools. Because this data set does not currently exist in Iowa; because it had to be gathered from many individuals in different locations; and because the purpose of the data collection was descriptive in nature, a survey was an appropriate method to collect the needed data in a standardized fashion (Fraenkel et al., 2011).

Research Design and Methodological Approach

This study utilized a cross-sectional, quantitative, correlation research design in order to determine the relationship or lack of relationship between two variables (Fraenkel, Wallen, & Hyun, 2011). This approach was suited for the research questions being investigated; specifically, was there a correlation between teachers' perceptions of a school's culture and the school's performance in terms of student learning results in both reading and mathematics?

The researcher was interested in how many of the Nine Characteristics of High-Performing Schools as described by the Center for Educational Effectiveness, when controlling for the student poverty rate, were associated with student proficiency rates in reading and mathematics. A multiple variable analysis was a necessary element of the research methodology as the researcher needed to account for the impact of poverty as well as the Nine Characteristics

of High-Performing Schools on two dependent variables: reading and mathematics proficiency (Creswell, 2008).

Research Setting

Having served in a number of roles as an Iowa educator, the researcher had been involved in a number of school improvement efforts at the building and district level in rural, suburban and urban districts. The researcher and many colleagues around the state have had difficulty in determining the success of school improvement efforts and how to best identify opportunities to accelerate improvement in student learning. State data over the past ten years indicate that school and district performance on the state student achievement measure was most closely associated with socio-economic status, disability status, primary language status and ethnicity (see Figures 3.1 – 3.24).

Until 2010, the Iowa Tests of Basic Skills (ITBS) and the Iowa Tests of Educational Development (ITED) were the only measures used to assess school and district academic performance (in 2010, the ITBS and ITED were replaced by the Iowa Assessments in an effort to better align with the newly adopted Iowa Common Core). These norm-referenced, standardized measures were used to evaluate student performance in terms of school or district percent of students that were proficient. Individual student growth was not used to inform individual school or district status relative to NCLB.

The following figures describe the gaps in reading proficiency rates on the state assessment among various above mentioned subgroups at grades 4, 8 and 11 from 2002 through 2012 in the state of Iowa as reported by the Iowa Department of Education. The first table in each pair depicts the academic years 2001-2002 through 2008-2009. The second table in each

pair depicts the academic years 2005-2006 through 2011-2012. The final data point in the second table in each pair is from the Iowa Assessments, not the ITBS or ITED.

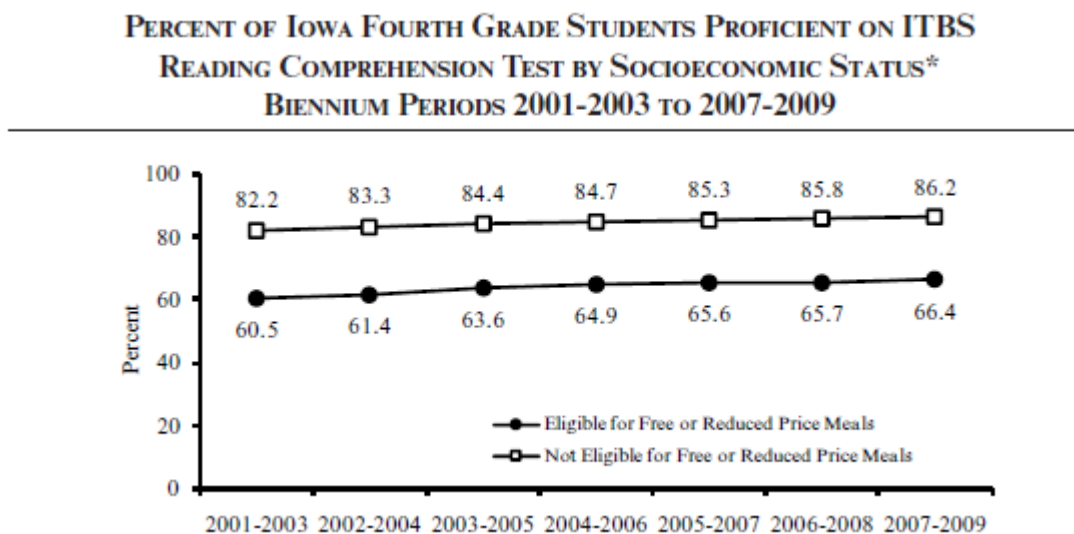


Figure 3.1. Comparison of 4th Grade Reading Performance by Socioeconomic Status 2002 –2009
(Iowa Department of Education Condition of Education Report 2009)

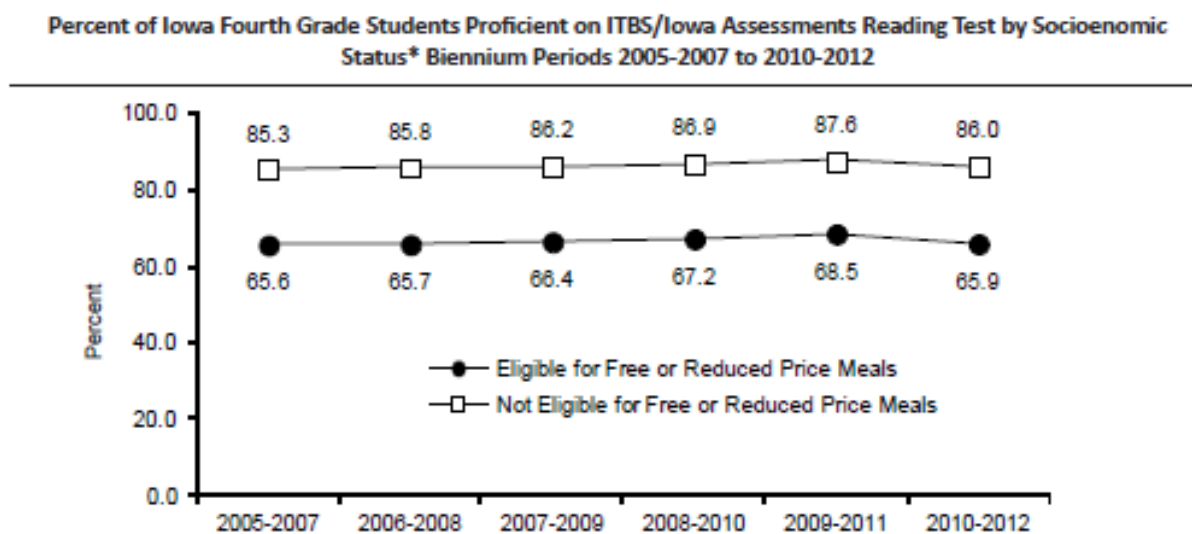


Figure 3.2 Comparison of 4th Grade Reading Performance by Socioeconomic Status 2006 – 2012
(Iowa Department of Education Condition of Education Report 2012)

**PERCENT OF IOWA FOURTH GRADE STUDENTS PROFICIENT ON
ITBS READING COMPREHENSION TEST BY DISABILITY STATUS*
BIENNIUM PERIODS 2001-2003 TO 2007-2009**

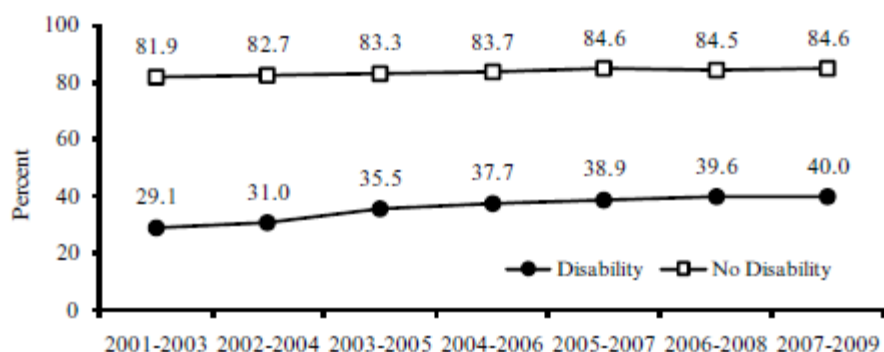


Figure 3.3. Comparison of 4th Grade Reading Performance by Disability Status 2002 - 2009

(Iowa Department of Education Condition of Education Report 2009)

**Percent of Iowa Fourth Grade Students Proficient on ITBS/Iowa Assessments Reading Test by Socioeconomic
Status* Biennium Periods 2005-2007 to 2010-2012**

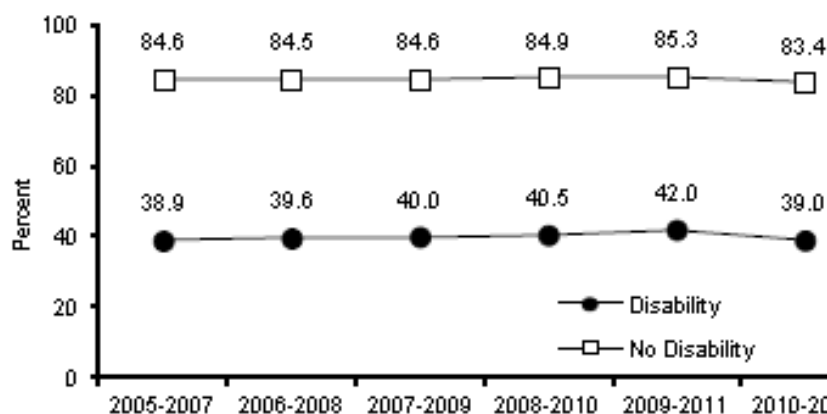


Figure 3.4. Comparison of 4th Grade Reading Performance Trends by Disability Status 2006 - 2012

(Iowa Department of Education Condition of Education Report 2012)

**PERCENT OF IOWA FOURTH GRADE STUDENTS PROFICIENT ON
ITBS READING COMPREHENSION TEST BY PRIMARY LANGUAGE STATUS*
BIENNIUM PERIODS 2001-2003 TO 2007-2009**

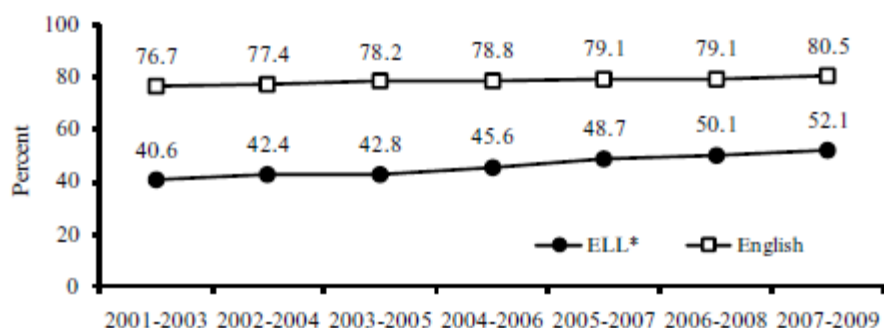


Figure 3.5. Comparison of 4th Grade Reading Performance Trends by Primary Language Status 2002- 2009

(Iowa Department of Education Condition of Education Report 2009)

**Percent of Iowa Fourth Grade Students Proficient on ITBS/Iowa Assessments Reading Test
by Primary Language Status Biennium Periods 2005-2007 to 2010-2012**

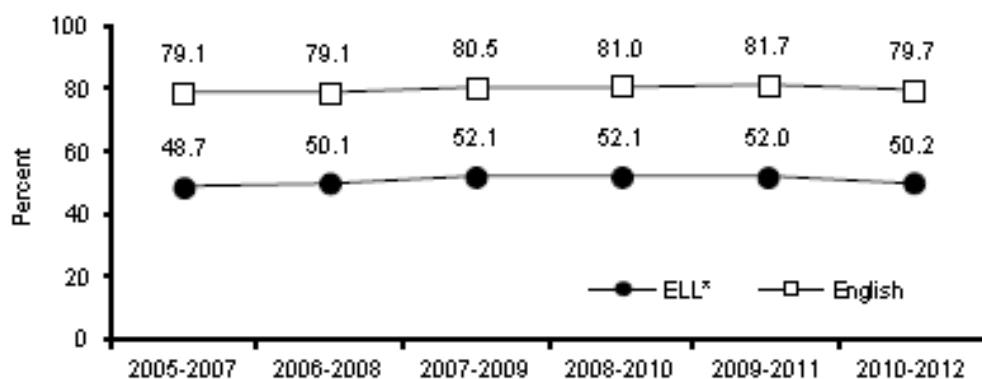


Figure 3.6. Comparison of 4th Grade reading performance trends by Primary Language Status 2006 – 2012

(Iowa Department of Education Condition of Education Report 2012)

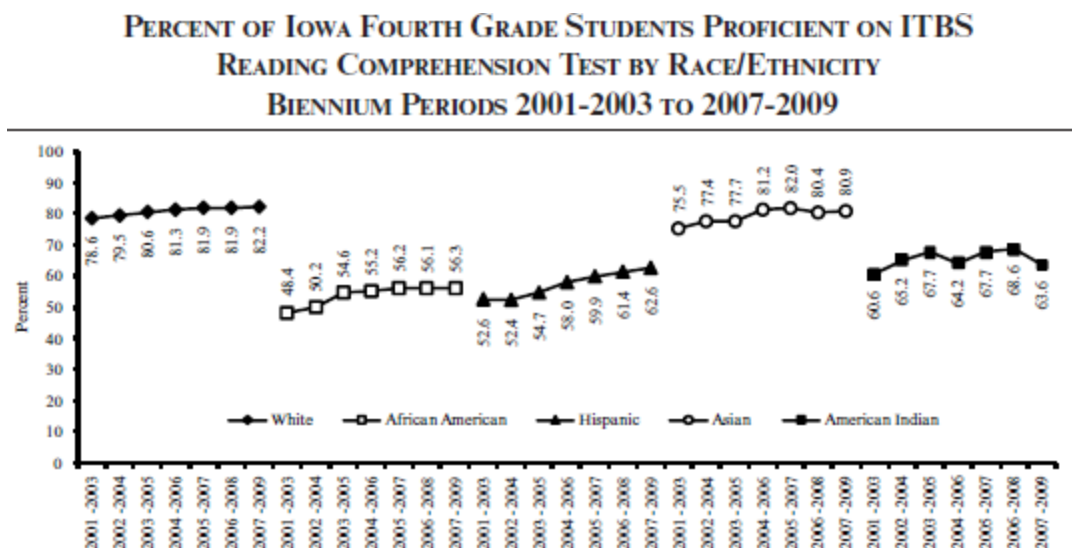


Figure 3.7. Comparison of 4th Grade Reading Performance Trends by Race/Ethnicity 2002 – 2009

(Iowa Department of Education Condition of Education Report 2009)

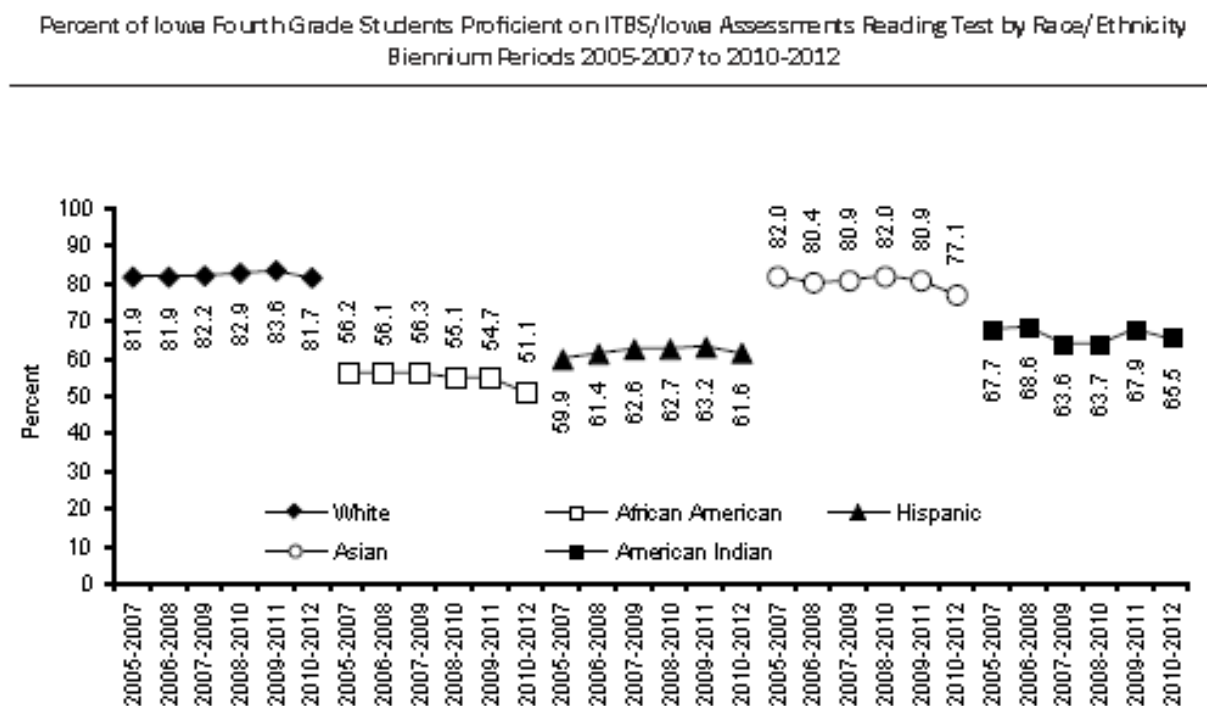


Figure 3.8. Comparison of 4th Grade Reading Performance Trends by Race/Ethnicity 2006 – 2012

(Iowa Department of Education Condition of Education Report 2012)

**PERCENT OF IOWA EIGHTH GRADE STUDENTS PROFICIENT ON ITBS
READING COMPREHENSION TEST BY SOCIOECONOMIC STATUS*
BIENNIUM PERIODS 2001-2003 TO 2007-2009**

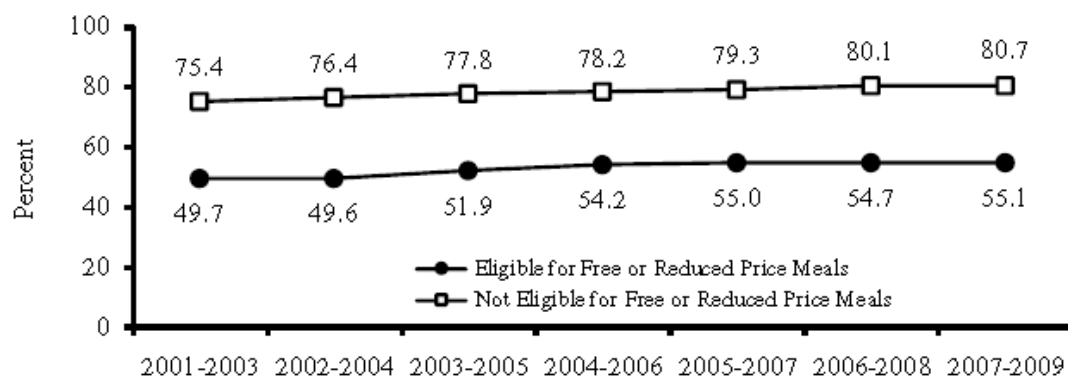


Figure 3.9. Comparison of 8th Grade Reading Performance Trends by Socioeconomic Status 2002- 2009

(Iowa Department of Education Condition of Education Report 2009)

**Percent of Iowa Eighth Grade Students Proficient on ITBS/Iowa Assessments Reading Test by Socioeconomic
Status* Biennium Periods 2005-2007 to 2010-2012**

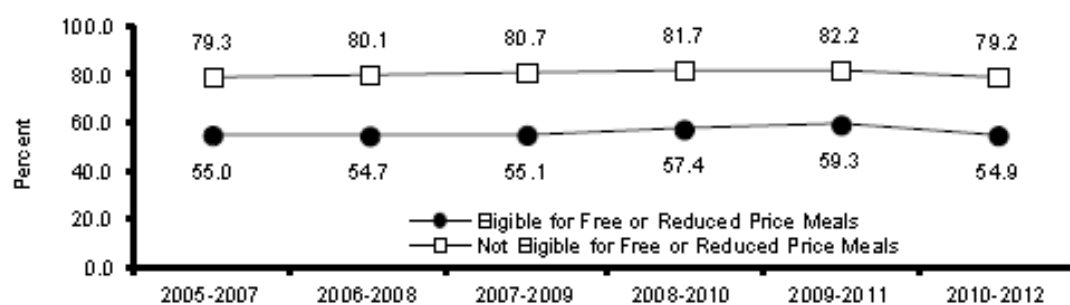


Figure 3.10. Comparison of 8th Grade Reading Performance Trends by Socioeconomic Status 2006 -2012

(Iowa Department of Education Condition of Education Report 2012)

**PERCENT OF IOWA EIGHTH GRADE STUDENTS PROFICIENT ON ITBS
READING COMPREHENSION TEST BY DISABILITY STATUS*
BIENNIUM PERIODS 2001-2003 TO 2007-2009**

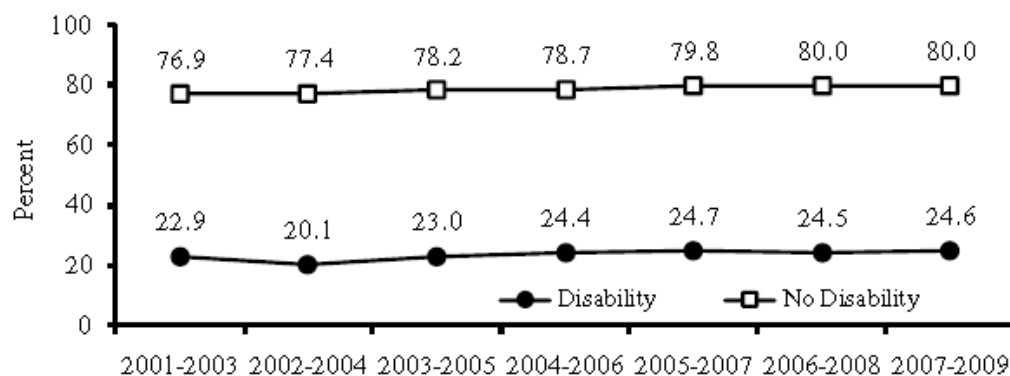


Figure 3.11. Comparison of 8th Grade Reading Performance Trends by Disability Status 2002 - 2009

(Iowa Department of Education Condition of Education Report 2009)

**Percent of Iowa Eighth Grade Students Proficient on ITBS/Iowa Assessments Reading Test by Disability Status*
Biennium Periods 2005-2007 to 2010-2012**

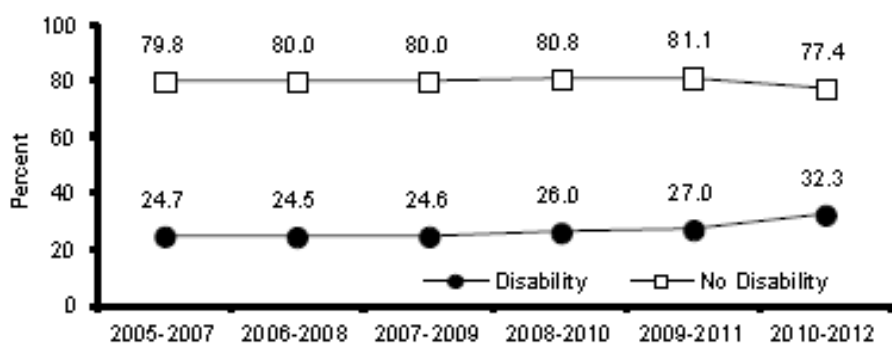


Figure 3.12. Comparison of 8th Grade Reading Performance Trends by Disability Status 2006 - 2012

(Iowa Department of Education Condition of Education Report 2012)

**PERCENT OF IOWA EIGHTH GRADE STUDENTS PROFICIENT ON ITBS
READING COMPREHENSION TEST BY PRIMARY LANGUAGE STATUS*
BIENNIAL PERIODS 2001-2003 TO 2007-2009**

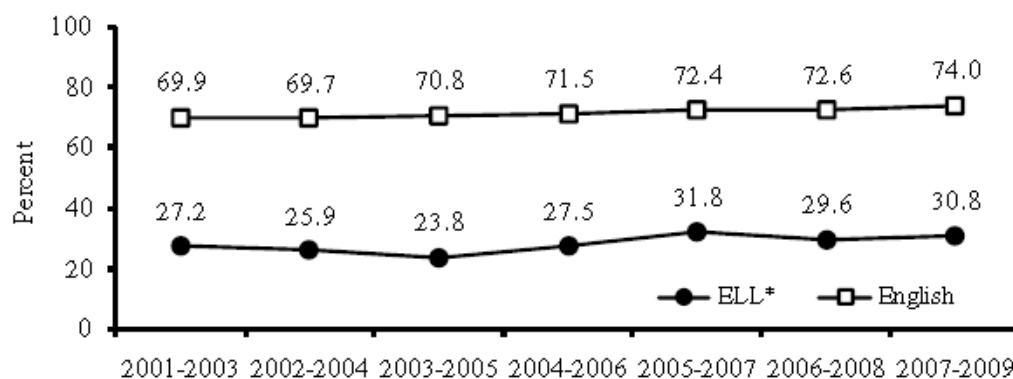


Figure 3.13. Comparison of 8th Grade Reading Performance Trends by Primary Language Status 2002 - 2009

(Iowa Department of Education Condition of Education Report 2009)

**Percent of Iowa Eighth Grade Students Proficient on ITBS/Iowa Assessments Reading Test by Primary Language
Status* Biennial Periods 2005-2007 to 2010-2012**

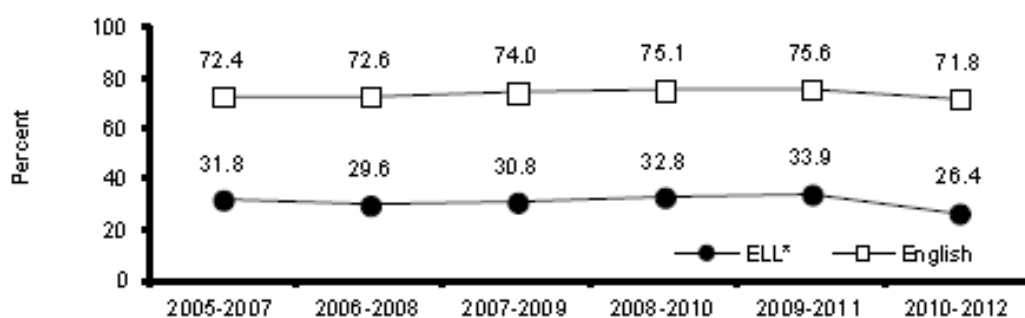


Figure 3.14. Comparison of 8th Grade Reading Performance Trends by Primary Language Status 2006 - 2012

(Iowa Department of Education Condition of Education Report 2012)

**PERCENT OF IOWA EIGHTH GRADE STUDENTS PROFICIENT ON
ITBS READING COMPREHENSION TEST BY RACE/ETHNICITY
BIENNIUM PERIODS 2001-2003 TO 2007-2009**

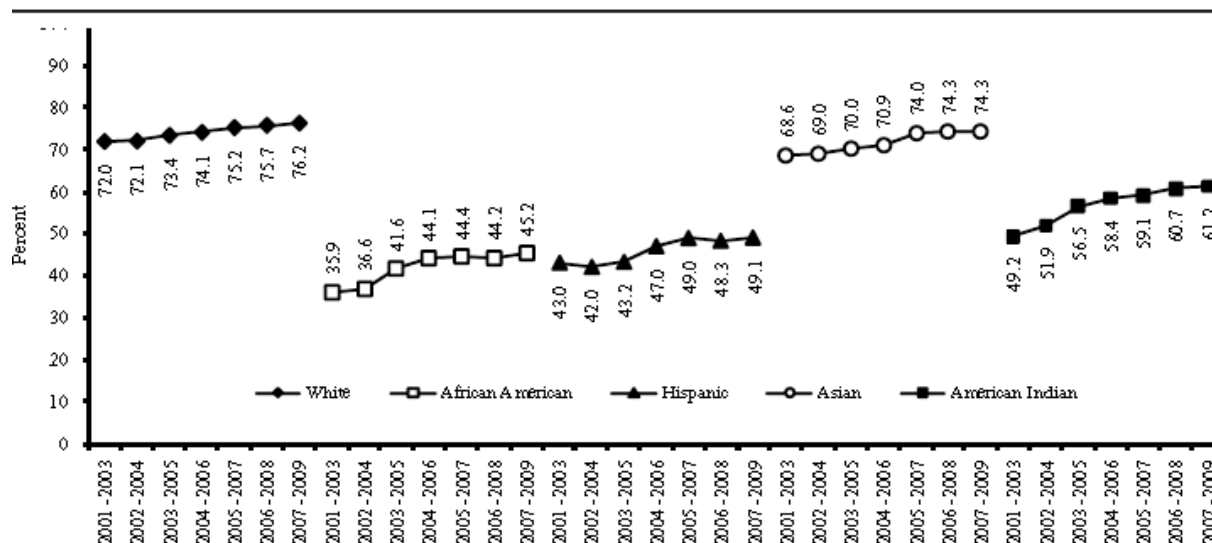


Figure 3.15. Comparison of 8th Grade Reading Performance Trends by Race/Ethnicity 2002 – 2009

(Iowa Department of Education Condition of Education Report 2009)

**Percent of Iowa Eighth Grade Students Proficient on ITBS/Iowa Assessments Reading Test by Race/Ethnicity
Biennium Periods 2005-2007 to 2010-2012**

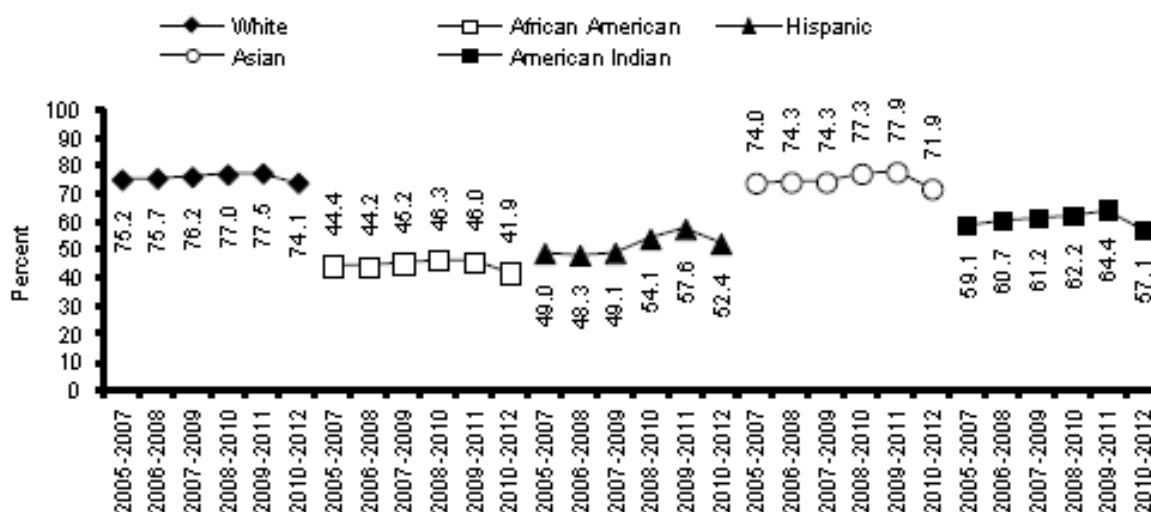


Figure 3.16. Comparison of 8th Grade Reading Performance Trends by Race/Ethnicity 2006 – 2012

(Iowa Department of Education Condition of Education Report 2012)

**PERCENT OF IOWA ELEVENTH GRADE STUDENTS PROFICIENT ON ITED
READING COMPREHENSION TEST BY SOCIOECONOMIC STATUS*
BIENNIAL PERIODS 2001-2003 TO 2007-2009**

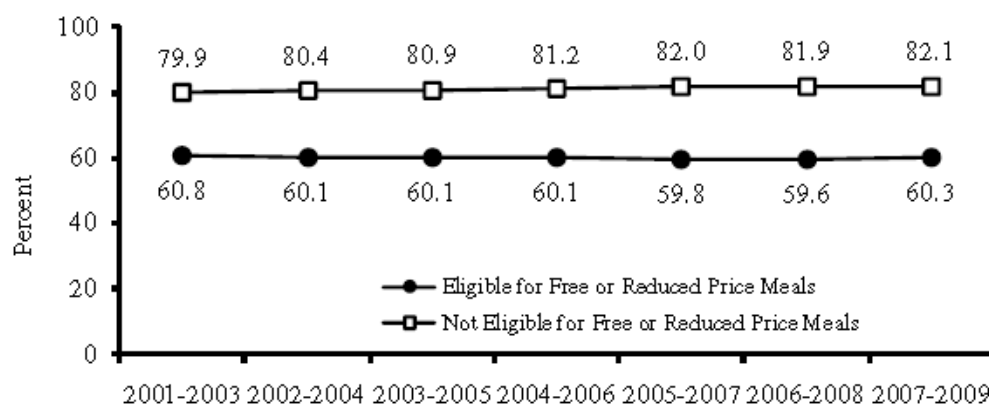


Figure 3.17. Comparison of 11th Grade Reading Performance Trends by Socioeconomic Status 2002 - 2009

(Iowa Department of Education Condition of Education Report 2009)

**Percent of Iowa Eleventh Grade Students Proficient on ITED/Iowa Assessments Reading Test
by Socioeconomic Status* Biennial Periods 2005-2007 to 2010-2012**

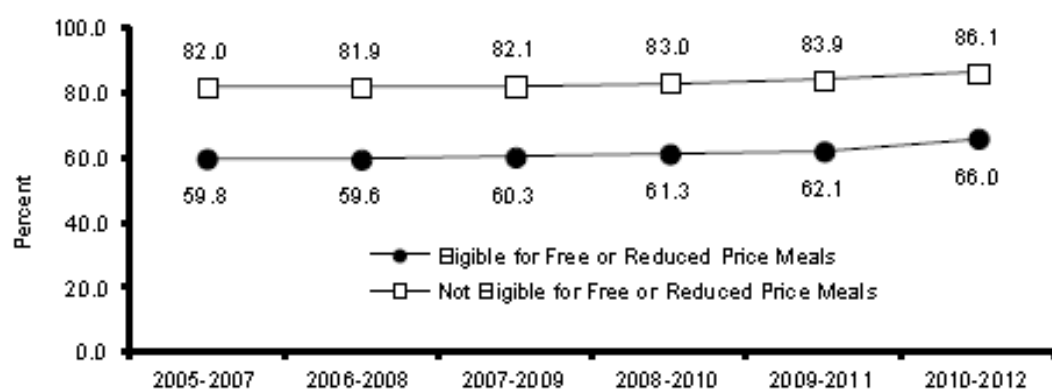


Figure 3.18. Comparison of 11th Grade Reading Performance Trends by Socioeconomic Status 2006 - 2012

(Iowa Department of Education Condition of Education Report 2012)

**PERCENT OF IOWA ELEVENTH GRADE STUDENTS PROFICIENT ON ITED
READING COMPREHENSION TEST BY DISABILITY STATUS*
BIENNIUM PERIODS 2001-2003 TO 2007-2009**

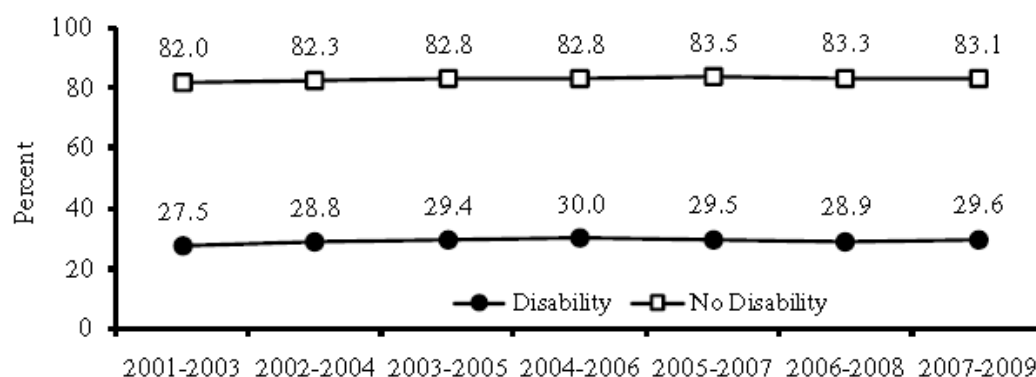


Figure 3.19. Comparison of 11th Grade Reading Performance Trends by Disability Status 2002 – 2009

(Iowa Department of Education Condition of Education Report 2009)

Percent of Iowa Eleventh Grade Students Proficient on ITED/Iowa Assessments Reading Test by Disability Status*
Biennium Periods 2005-2007 to 2010-2012

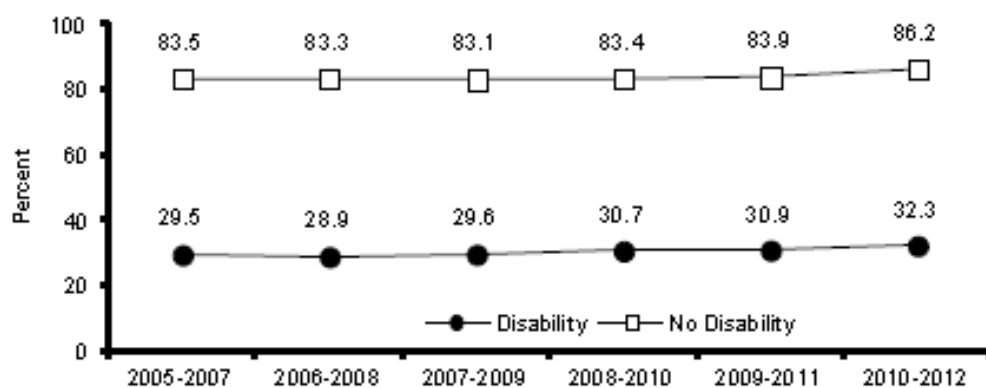


Figure 3.20. Comparison of 11th Grade Reading Performance Trends by Disability Status 2006 – 2012

(Iowa Department of Education Condition of Education Report 2012)

**PERCENT OF IOWA ELEVENTH GRADE STUDENTS PROFICIENT ON ITED
READING COMPREHENSION TEST BY PRIMARY LANGUAGE STATUS*
BIENNIAL PERIODS 2001-2003 TO 2007-2009**



Figure 3.21. Comparison of 11th Grade Reading Performance Trends by Primary Language Status 2002 - 2009

(Iowa Department of Education Condition of Education Report 2009)

Percent of Iowa Eleventh Grade Students Proficient on ITED/Iowa Assessments Reading Test by Primary Language Status* Biennial Periods 2005-2007 to 2010-2012

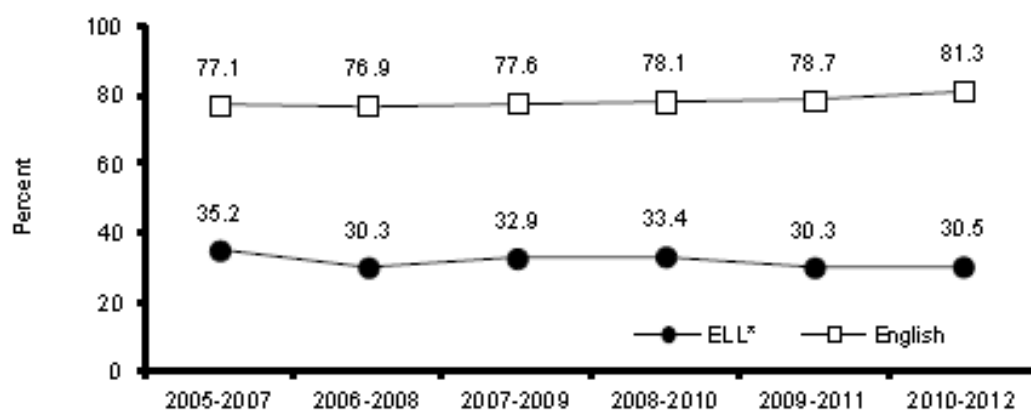


Figure 3.22. Comparison of 11th Grade Reading Performance Trends by Primary Language Status 2006 – 2012

(Iowa Department of Education Condition of Education Report 2012)

**PERCENT OF IOWA ELEVENTH GRADE STUDENTS PROFICIENT ON ITED
READING COMPREHENSION TEST BY RACE/ETHNICITY
BIENNIUM PERIODS 2001-2003 TO 2007-2009**

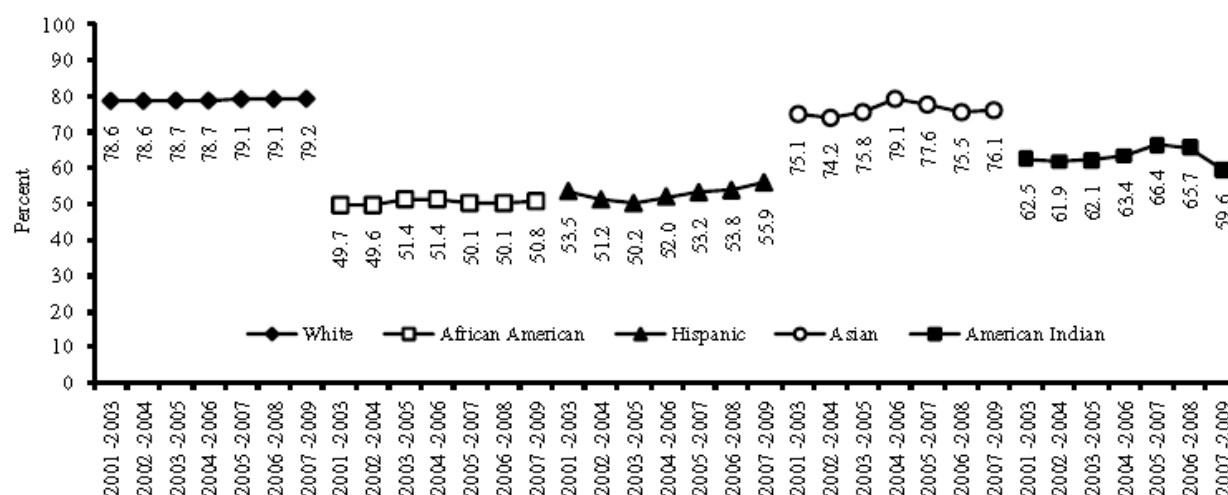


Figure 3.23. Comparison of 11th Grade Reading Performance Trends by Race/Ethnicity 2002 – 2009

(Iowa Department of Education Condition of Education Report 2009)

**Percent of Iowa Eleventh Grade Students Proficient on ITED/Iowa Assessments Reading Test by Race/Ethnicity
Biennium Periods 2005-2007 to 2010-2012**

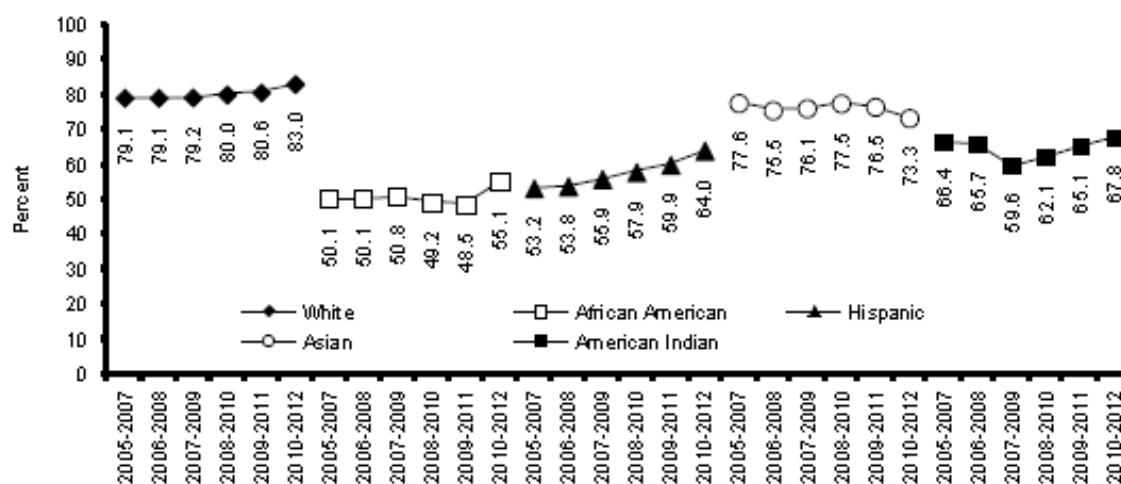


Figure 3.24. Comparison of 11th Grade Reading Performance Trends by Race/Ethnicity 2006 – 2012

(Iowa Department of Education Condition of Education Report 2012)

Because these measures do not account for growth, it is difficult to demonstrate success in a meaningful way to various constituencies (parents, school boards, legislature, instructional staff, administrators) and further, it is challenging to meaningfully engage teachers in rigorous improvement efforts when incremental improvement of both less than proficient students and proficient students is not reflected in the state's measure of achievement.

Given this reality, the researcher was interested in whether the performance of a school as measured by the state could be correlated to the school's teachers' perceptions of characteristics of high-performing schools. Teacher perceptions could potentially provide valuable information in identifying the best next steps for improving student performance.

Sample and Participants

A total of 10 Iowa schools were included in the study. A purposeful sampling approach was used to ensure that there was an even match between low-performing and high-performing schools. The subject schools were comprised of two low-performing elementary schools; two low-performing middle schools; one low-performing high school; two high-performing elementary schools; two high-performing middle schools; and one high-performing high school, depicted in Table 3.1.

Table 3.1

Iowa Subject Schools by Grade Level and Performance

Type of School (grade levels served)	Low-Performing	High-Performing
Elementary (K-5)	2	2
Middle (6-8)	2	2
High (9-12)	1	1

Low-performing schools were selected from those Iowa schools identified as Persistently Lowest Achieving Schools (PLAS) by the state and high-performing schools were selected from among those schools demonstrating three consecutive years of improvement on the ITBS or ITED using 2006-2007, 2007-2008, 2008-2009 and 2009-2010 test results available from the Iowa Department of Education. In order to ensure an adequate staff size for the survey, schools from 3A and 4A districts (Iowa's largest) formed the population from which the sample was drawn.

A preliminary review of schools' performance trends revealed that a limited number of schools were available in each category. Since Iowa does not have a measure for school effectiveness nor does it have an assessment designed to measure student growth, the researcher was required to create a method to define high-performing schools. Ultimately, the researcher established four criteria for defining high-performing Iowa schools:

- 1) Three years of increased percent of students scoring proficient in reading;
- 2) School met the annual measureable objective for reading in 2010;
- 3) Three years of increased percent of students scoring proficient in mathematics;
- 4) School met the annual measureable objective for mathematics in 2010.

The following grade level results were used to identify the population:

Elementary – 4th grade; Middle Schools – 8th grade; High Schools – 11th grade

The population for high-performing schools using the researcher's method was very small. At the middle and high school level, half of the population was included in the study. Comparison schools from Washington were selected from the extensive Center of Educational Effectiveness (CEE) database, which contains survey data from over 400 public schools. A

matched sample based on school size, socioeconomic status, primary language status, disability status, race/ethnicity status, and school performance was drawn from the existing database.

Appendix B provides the demographic characteristics of the 10 Iowa subject schools.

Research data from the Iowa schools were collected in a cooperative effort between the researcher and the staff of the CEE. The CEE prepared the surveys for each school. The researcher received a packet for each school containing a survey and a confidentiality envelope for each respondent. The researcher met with each school principal involved with the study to provide administration instructions. The completed surveys were shipped directly to the CEE by the school utilizing a postage-paid mailing box.

The CEE produced an aggregate report and sent it to the researcher along with the raw data in anonymous form to ensure confidentiality. Each sample school was given the option of having its results sent back to them directly from the CEE.

Survey Instrument

The Center for Educational Effectiveness Staff Survey was developed in 2002 for the purpose of quantifying strengths and opportunities for school improvement in K-12 schools based on the characteristics of high-performing schools. The survey has gone through several revisions and has a very high degree of reliability. Table 3.2 displays the Cronbach's Alpha for each of the nine constructs as well as the Cronbach's Alpha calculated for the nine constructs from the data collected included in this study.

Table 3.2

Internal Factor Reliability for Each of the EES-Staff Survey Nine Constructs from the Center for Educational Effectiveness (n = 40,982) and from This Study (n = 367)

Staff Survey Constructs from EES-Staff Survey v.8.0	Cronbach's Alpha	
	CEE	This Study
Clear and Shared Focus	0.84	0.82
High Standards and Expectations for All Students	0.81	0.83
Effective School Leadership	0.94	0.90
High Levels of Collaboration and Communication	0.90	0.86
Curriculum, Instruction, and Assessment Aligned with Standards	0.89	0.86
Frequent Monitoring of Teaching and Learning	0.83	0.84
Focused Professional Development	0.90	0.84
Supportive Learning Environment	0.90	0.87
High Levels of Family and Community Involvement	0.86	0.80

The CEE Staff Survey is comprised of 86 items that ask certified staff to decide to what degree they agreed that each statement is almost never true, seldom true, sometimes true, often true, or almost always true on a five-point Likert scale. These items were used to measure each of the Nine Characteristics of High-Performing Schools constructs: Clear and Shared Focus; High Standards and Expectations for All Students; Effective School Leadership; High Levels of Collaboration and Communication; Curriculum, Instruction, and Assessment Aligned with Standards; Frequent Monitoring of Learning and Teaching; and Focused Professional Development. The survey instrument is included in Appendix A.

The CEE conducts scale reliability tests on an ongoing basis and since 2002 has added and deleted items to improve reliability. In version 8.0, the version utilized in this study, each of the nine characteristics had a reliability scale of greater than .800. The instrument has been used for eight years in the states of Washington and Idaho, including 55,000 school staff, and was developed from over 20 years of research on organizational development. It is approved by both the Office of the Superintendent Public Instruction (OSPI) of the state of Washington and the Idaho State Department of Education.

Variables

Table 3.3 lists each of the study's variables and the method of measurement.

Table 3.3

Dependent and Independent Variables and Method of Measurement

Variable	Method of Measurement
School Performance in Mathematics*	% of students scoring proficient or higher on the Iowa Tests of Basic Skills (grades 4 & 8) and the Iowa Tests of Educational Development (grade 11)
School Performance in Reading*	% of students scoring proficient or higher on the Iowa Tests of Basic Skills (grades 4 & 8) and the Iowa Tests of Educational Development (grade 11)
Socioeconomic Level**	% of students qualified for free or reduced price meals
Teacher perceptions of school culture on Nine Characteristics of High-Performing Schools**	Center for Educational Effectiveness Staff Survey (Version 8.0)

*Dependent Variables, **Independent Variables

Dependent Variables. The two dependent variables were school performance as defined by a trend in the percent of students scoring proficient (41st percentile or higher on national norms) in reading and mathematics on the Iowa Tests of Basic Skills (elementary and middle schools) and the Iowa Tests of Educational Development (high schools).

Independent Variables. SES was measured by the percentage of students who qualified for free/reduced price meals and teacher perception of school quality on the nine characteristics as measured by 86 items on the 100 item CEE survey, utilizing a 5-point Likert scale: with 1 = almost always true, 2 = often true, 3 = sometimes true, 4 = seldom true, and 5 = almost never true. Each of the nine characteristic's construct was created from a number of statements on the survey (numbering from five to 12 items per characteristic). Items were then reverse coded in the dataset so that higher values represented "more" agreement with the item. The responses to all of the statements for each characteristic were summed for an overall total response for that characteristic, with a higher score indicating more of that item. Table 3.4 depicts the organization of survey items according to the nine characteristics.

Table 3.4

Number of Survey Items for each of the Nine Characteristics of High-Performing Schools

The Nine Characteristics of High-Performing Schools	Number of Survey Items Aligned with Each Characteristic
Clear and Shared Focus	8
High Standards and Expectations for All Students	8
Effective School Leadership	9
High Levels of Collaboration and Communication	12
Curriculum, Instruction, and Assessment Aligned with Standards	11
Frequent Monitoring of Teaching and Learning	5
Focused Professional Development	10
Supportive Learning Environment	16
High Levels of Family and Community Involvement	7

Data Analysis and Research Questions

The data were analyzed using both descriptive and inferential methods appropriate to the questions being addressed. A complete explanation of the statistical analyses follows.

Descriptive Analysis

Descriptive statistics are used to accurately and efficiently describe information contained in multiple scores, by using relatively few indices, such as mean and median (Fraenkel et al., 2011). SPSS software was used to calculate the means, standard deviations and frequencies for each independent and dependent variable. The results of these analyses were used to answer the first research question.

Inferential Analysis

For each of the nine constructs for the Nine Characteristics of High-Performing Schools, t-tests for independent means were calculated in order to test the significance of difference between independent samples (Fraenkel et al., 2011) for the high- and low-performing schools. To determine the degree to which the variables were related as well as to assess any instances of multicollinearity between variables, Pearson product-moment correlations were calculated, appropriate for use with interval scores such as those used in this study (Thorkildsen, 2005).

A hierarchical regression analysis was used to test the effect of variables independent of the effect of other variables. In this case, when controlling for socio-economic status, the researcher intended to discover the degree to which the measure of each of the nine characteristics of high-performing schools predicted school performance in mathematics and reading, over and above SES. A correlation matrix was constructed for these variables. Multiple regression is, “a technique that enables researchers to determine a criterion variable and the best combination of two or more predictor variables” (Fraenkel & Wallen, 2006, p. 338-339). Since this study included more than one independent variable, a multiple regression analysis was necessary. Multiple regression is based on a linear relationship and can be expressed as:

$$Y = a + bX_1 + bX_2$$

In this equation, Y is the predicted outcome, X₁ is the value of the first predictor variable and X₂ is the value of the second predictor variable. According to Tabachnick & Fidell (2007), a minimum sample size is required for an accurate regression analysis, expressed as:

$$8m + 50 = n$$

In this equation, m = the number of independent variables. For this study, there were 10 independent variables, requiring a minimum value for n of 130:

$$8(10) + 50 = 130$$

Since the sample size for this study was $n = 367$, there were sufficient numbers to conduct a multiple regression analysis.

The design of the hierarchical, multiple regression analysis consisted of three blocks: school socioeconomic status; classroom practices; and school conditions. The first block contained just one variable: socioeconomic status (SES). The second block contained two of the Nine Characteristics of High-Performing Schools that related to classroom practices (Curriculum, Instruction and Assessment Aligned to Standards (CIA) and Frequent Monitoring of Teaching and Learning (MTL)); the third block contained five of the Nine Characteristics of High-Performing Schools that related to school conditions (CSF, HSE, EL, SLE, & PCI). After analyzing the results of correlations, the researcher eliminated two of the independent variables, Focused Professional Development (FPD) and High Levels of Collaboration & Communication (C) because of multicollinearity issues, thus they were not entered into the regression model. Since the researcher intended to determine the effect of each of the Nine Characteristics of High-Performing Schools on reading and mathematics performance when controlling for SES, SES was the only variable in Block 1. The researcher had to first determine what impact SES alone had on reading and mathematics performance. Figure 3.25 illustrates the hierarchical regression analysis model.

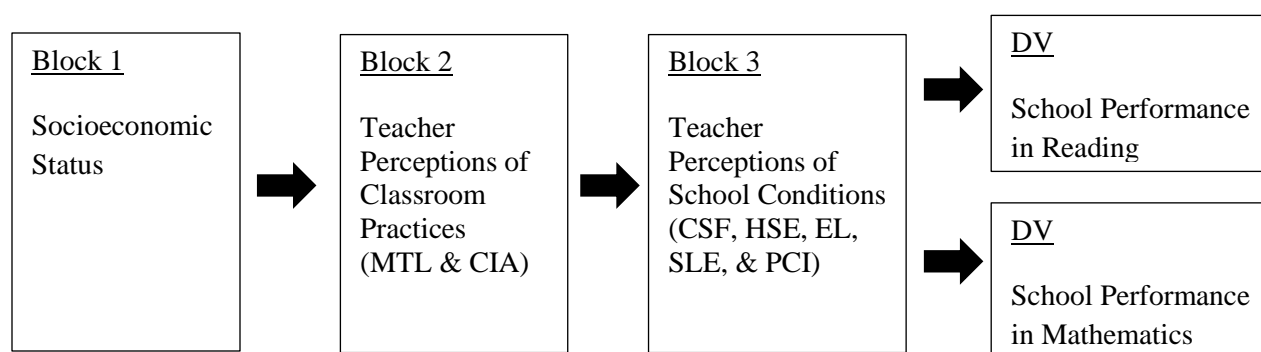


Figure 3.25. Visual Model of the Sequential Hierarchical Regression Analyses

In order to more efficiently report the results of the study, the researcher used the abbreviations for the Nine Characteristics of High-Performing Schools that are employed by the CEE. Table 3.5 provides the abbreviations used for each of the nine characteristics of high-performing schools.

Table 3.5

Abbreviations for The Nine Characteristics of High-Performing Schools

Characteristic	Abbreviation
Clear and Shared Focus	CSF
High Standards and Expectations for All Students	HSE
Effective School Leadership	EL
High Levels of Collaboration and Communication	C
Curriculum, Instruction, and Assessment Aligned with Standards	CIA
Frequent Monitoring of Teaching and Learning	MTL
Focused Professional Development	FPD
Supportive Learning Environment	SLE
High Levels of Family and Community Involvement	PCI

Delimitations

This study was delimited to the state of Iowa; specifically, teachers in high - and low-performing schools in the state.

Limitations

There were three key limitations to this study. First, the state of Iowa does not have a method to determine school effectiveness and collects only limited academic performance data for all schools. Therefore, to determine the low-performing schools, the researcher relied on the U.S. Department of Education's definition of PLAS. The data available for Iowa schools in making this designation were insufficient as there was not an adequate measure of student growth to make a determination of school effectiveness. To identify high-performing schools, the researcher had to create a method to distinguish schools beyond the percent of students proficient in mathematics and reading. Having only a norm-referenced assessment not designed to measure growth, the researcher had to rely on a trend of increasing the percentage of students testing proficient as a proxy for student growth.

Second, the school performance data used in the study were cross-sectional, not longitudinal. School performance in mathematics and reading is based on the performance of just one grade level in each school at just one point in time. The data reflect an incomplete picture of how well the schools performed in mathematics and reading.

Finally, the respondents were asked to report their self-perception on each item. There is likely variance in how individuals interpreted the actual language in the 86 survey items used to measure teacher perception of the Nine Characteristics of High-Performing Schools. As would be expected, some of the participants did not respond to every item.

Summary

This chapter provided the three research questions and a description of the research design and methodological approach used in this study. It included a description of the research setting, description of characteristics of the populations included in the sample, and an explanation of the data collection procedure and description of the instrument. This chapter also included a discussion of the dependent and independent variables, the research design applied to each question, and what statistical tests were applied to the variables. Finally, a brief discussion of delimitations and study limitations concluded this chapter.

CHAPTER 4

RESULTS

The purpose of this study was to identify the differences between staff perceptions of school culture in low-performing and high-performing Iowa schools and explore the utility of Iowa schools systematically collecting teacher perception data to inform school improvement efforts. The study included 10 Iowa schools: two low-performing elementary schools, two low-performing middle schools, one low-performing high school, two high-performing elementary schools, two high-performing middle schools and one high-performing high school. Perception data from teachers in each of the ten schools was collected using the Center for Educational Effectiveness Staff Survey, which measures perceptions of school culture based on the Nine Characteristics of High-Performing Schools.

This chapter presents the results of the data analysis and provides answers to the three identified research questions. The first section discusses the process of data screening and assumptions of data normality. The second section reports the descriptive statistics for each of the variables included in the study. Section three reports the results of the independent samples t-tests, followed by the fourth section: a discussion of the correlations between the independent and dependent variables. The fifth section explains the results of the hierarchical, multiple regression analysis used to answer the last two research questions. The sixth section provides answers to the three research questions followed by a chapter summary.

Data Screening and Assumptions of Normality

Before running any of the study's statistical analyses, the data were screened for missing values. In cases where a value for any of the independent variables was missing, the researcher

calculated the mean of all responses for that item and inserted the mean for the missing value in each case.

A multiple regression analysis requires that assumptions of normality be met. To determine a normal distribution of data meeting the following standards, Osborne & Waters (2002) stated that the following must be demonstrated:

1. Variables are normally distributed.
2. Relationship between dependent and independent variables are linear in nature.
3. Variables are measured without error (reliably).

Tabachnick & Fidell (2007) stated that meeting the assumptions of normality can be ascertained by analyzing skewness and kurtosis values. Skewness refers to the value of the mean relative to the center of the distribution. Variables with scores over 3.0 on the skewness index indicate an extreme level of skewness. Kurtosis refers to how flat or peaked the variable is distributed. Values falling between 8.0 and 20.0 on the kurtosis index indicate extreme kurtosis. Table 4.1 depicts the results the normality screening for the dependent and independent variables. The results of the assessment of normality indicate that assumptions of normality were met for all variables.

Table 4.1

Assessment of Normality for Variables in the Model (n=367)

Variables	Skew	SE of Skew	Kurtosis	SE of Kurtosis
% Proficient in Mathematics*	-.321	.127	-.782	.254
% Proficient in Reading*	.279	.127	-1.325	.254
% Qualified for Free/Reduced Price Meals (SES measure)	.027	.127	-1.189	.254
Clear & Shared Focus	-.638	.127	.553	.254
High Standards & Expectations for All Students	-.147	.127	-.013	.254
Effective School Leadership	-.929	.127	.808	.254
High Levels of Collaboration & Communication	-.031	.127	-.466	.254
Curriculum, Instruction, & Assessment Aligned with Standards	-.101	.127	-.135	.254
Frequent Monitoring of Learning & Teaching	-.156	.127	-.256	.254
Focused Professional Development	-.050	.127	-.441	.254
Supportive Learning Environment	-.328	.127	-.022	.254
High Levels of Family & Community Involvement	-.004	.127	-.292	.254

*Dependent Variables

Frequencies and Descriptive Statistics

A descriptive statistical analysis is necessary to provide the researcher the opportunity to meaningfully describe information from many scores with a small number of indices (Fraenkel et al., 2011). For each of the dependent and independent variables in this study, a descriptive analysis was performed. The survey was distributed to 485 teachers in the ten subject schools. Three hundred and sixty-seven completed surveys were collected, for a response rate of 75.67%, a rate that exceeds the acceptable level for this population (*Instructional Assessment Resources*, 2011) Table 4.2 reports the number and percentage of respondents by school level and performance level.

Table 4.2

Frequency & Percentage of Survey Respondents by School Level & Performance Level (n=367)

School Level	Respondents	
	Low-Performing	High-Performing
Elementary (grades K-5)	52 (14.2%)	50 (13.6%)
Middle (grades 6-8)	85 (23.2%)	37 (10.1%)
High (grades 9-12)	60 (16.3%)	83 (22.6%)

A descriptive statistical analysis was conducted on each variable included in the study. Table 4.3 displays the range of data (minimum and maximum values), the mean, and the standard deviation for each of the twelve variables included in the study.

Table 4.3

Descriptive Statistics for Demographic Data, Dependent and Independent Variables (n=367)

Variables	Min	Max	Mean	SD
% Proficient in Mathematics*	27.27	87.09	63.184	16.769
% Proficient in Reading*	36.36	88.71	60.667	16.234
% Qualified for Free/Reduced Price Meals (SES measure)	33.00	100.00	66.443	19.303
Clear & Shared Focus	13.00	35.00	28.927	4.066
High Standards & Expectations For All	11.00	35.00	25.227	4.776
Effective School Leadership	13.00	53.00	39.901	7.309
High Levels of Collaboration & Communication	22.00	58.00	42.487	7.271
Curriculum, Instruction & Assessment Aligned with Standards	19.00	50.00	39.168	5.713
Frequent Monitoring of Teaching & Learning	11.00	40.00	28.950	5.474
Focused Professional Development	21.00	50.00	36.284	6.482
Supportive Learning Environment	29.00	75.00	57.609	8.599
High Levels of Family & Community Involvement	10.00	30.00	20.552	4.049

*Dependent Variables

Independent Samples t-tests

The independent samples t-tests are parametric statistical tests used to determine if a difference of significance exists between the means of two samples. Table 4.4 presents the groups statistics t-test.

Table 4.4

Group Statistics t-test

Performance Level		N	Mean	Std. Deviation	Std. Error Mean
CSF	Low-Performing	197	28.5663	3.69338	.26314
	High-Performing	170	29.3438	4.43311	.34000
HSE	Low-Performing	197	25.1822	4.16837	.29698
	High-Performing	170	25.2794	5.40748	.41474
EL	Low-Performing	197	39.0296	7.39089	.52658
	High-Performing	170	40.9106	7.10133	.54465
C	Low-Performing	197	41.7070	6.58869	.46942
	High-Performing	170	43.3900	7.91261	.60687
CIA	Low-Performing	197	38.5824	5.10268	.36355
	High-Performing	170	39.8470	6.29427	.48275
MTL	Low-Performing	197	28.6811	4.71246	.33575
	High-Performing	170	29.2620	6.24143	.47870
FPD	Low-Performing	197	35.0715	5.81819	.41453
	High-Performing	170	37.6893	6.93088	.53157
SLE	Low-Performing	197	57.1647	7.39646	.52698
	High-Performing	170	58.1232	9.80851	.75228
PCI	Low-Performing	197	19.7523	3.85109	.27438
	High-Performing	170	21.4792	4.08658	.31343

The mean for each construct for the low-performing and high-performing samples showed a consistent pattern where the mean for the high-performing sample was higher in each case, as was the standard error of mean.

Independent samples t-tests were conducted to determine if there was a difference between high-performing and low-performing schools for each of the Nine Characteristics of High-Performing Schools. Table 4.5 presents the results of the independent samples t-tests.

Table 4.5

Independent Samples t-tests – Summary of Results (n=367)

	<i>t</i>	<i>df</i>	<i>p</i>	Confidence Intervals	
				Lower	Upper
CSF	-1.83	365	.068	-1.61181	.05675
HSE	-.194	365	.846	-1.08162	.88728
EL*	-2.483	360.792	.013	-3.37082	-.39117
C	-2.223	365	.027	-3.17178	-.19431
CIA	-2.125	365	.034	-2.43502	-.09421
MTL	-1.014	365	.311	-1.70769	.54593
FPD	-3.933	365	<.001	-3.92659	-1.30906
SLE	-1.065	365	.288	-2.72838	.81147
PCI*	-4.146	350.029	<.001	-2.54622	-.90768

*equal variances not assumed

Analysis of the independent samples t-tests indicated that there was a statistically significant difference between the low-performing and high-performing schools for five of the nine characteristics: Effective School Leadership (EL) $t(360.792) = -2.483, p = .027$; High Levels of Collaboration and Communication (C) $t(365) = -2.223, p = .027$; Curriculum, Instruction, and Assessment Aligned with Standards (CIA) $t(365) = -2.2125, p = .034$; Focused Professional Development (FPD), $t(365) = -3.933, p = <.001$; and High Levels of Family and Community Involvement (PCI) $t(350.029) = -4.146, p = <.001$. In each of the five significant results, high-performing schools had a higher mean for the characteristic than the low-performing schools.

This analysis also indicated that for four of the nine characteristics, there was not a statistically significant difference between the low-performing and high-performing schools: Clear and Shared Focus (CSF) $t(365) = -1.83, p = .068$; High Standards and Expectations for All Students (HSE) $t(365) = -.194, p = .846$; Frequent Monitoring of Teaching and Learning (MTL) $t(365) = -1.014, p = .311$; and Supportive Learning Environment (SLE) $t(365) = -1.065, p = .288$.

Correlations

Correlation research utilizes multiple variables to describe relationships among those variables. Of particular importance in correlation research is the degree of linearity and multi-collinearity of these relationships. When variables are multi-collinear they contain redundant information that is not needed in the same analysis. Likewise, if a bivariate correlation is too high ($> .60$) a multi-collinear relationship exists (Allison, 2012; Leech, Barrett, & Morgan, 2011). To determine the degree of linearity or multicollinearity of the variables, Pearson r coefficients were computed among all 12 variables (two dependent and ten independent). Table 4.6 displays the Pearson r for each combination of variables.

Bonferonni Adjustment

Sixty-six Pearson correlation coefficients were computed for the two dependent and ten independent variables. It was determined that there was one instance of multicollinearity. When multiple correlations are computed, Green & Salkind (2008) recommended controlling for a Type I error by using the Bonferonni Adjustment method. Using the generally accepted significance level of .05 for p as the denominator and the number of computed correlations as the numerator, the following equation is executed.

$$66/.05 = .00075$$

A correlation is not significant unless the p value is less than the corrected (and more conservative) significance level of .00075. Using the revised level of significance, 51 of the 66 correlations were determined to be significant. The 51 significant correlations are noted with an asterisk (*) in table 4.6.

Table 4.6

Correlation Matrix for Dependent and Independent Variables (n=367)

	1	2	3	4	5	6	7	8	9	10	11
1 CSF	--										
2 HSE	.458*	--									
3 EL	.649*	.345*	--								
4 C	.777*	.594*	.680*	--							
5 CIA	.694*	.590*	.446*	.747*	--						
6 MTL	.709*	.582*	.589*	.811*	.764*	--					
7 FPD	.697*	.529*	.629*	.787*	.728*	.804*	--				
8 SLE	.697*	.557*	.703*	.786*	.667*	.731*	.692*	--			
9 PCI	.641*	.492*	.568*	.706*	.659*	.667*	.715*	.710*	--		
10 Math	.184*	.091	.131	.195*	.268*	.165	.253*	.135	.285*	--	
11 Read	.207*	.133	.181*	.227*	.256*	.191*	.287*	.176	.313*	.962*	--
12 SES	-.008	.017	-.088	-.023	-.031	-.011	-.110	.029	-.152	-.804*	-.864*

Note: * $p < .00075$ Bonferonni adjustment for multiple correlations to minimize chance of Type I error.

Hierarchical Regression

A sequential, hierarchical regression analysis was used to determine whether the independent variables in the following combinations were statistically significant predictors for each of the dependent variables. Two independent variables produced a consistently high correlation with the MTL variable thus indicating multicollinearity: High Levels of Collaboration and Communication with MTL, $r = .811$ and Focused Professional Development

with MTL, $r = .804$. Those two independent variables were excluded from the hierarchical regression analyses due to concerns of multicollinearity. Two hierarchical regression analyses were conducted, with each analysis utilizing two blocks. The first block included student socioeconomic status, or percent of students qualifying for free/reduced price meals. The second block included Classroom Practices, defined by two of the nine characteristics (Curriculum, Instruction, and Assessment Aligned with Standards and Frequent Monitoring of Teaching and Learning) and School Conditions, defined by five of the nine characteristics (Clear and Shared Focus, High Standards and Expectations for All Students, Effective School Leadership, Supportive Learning Environment, and High Levels of Family and Community Involvement). The two dependent variables tested were school performance in reading and school performance in mathematics. The following sections include the results of these hierarchical regression analyses.

Reading

A hierarchical regression analysis was conducted for the first dependent variable: school performance in reading. Table 4.7 reports the results for this regression analysis, including unstandardized regression coefficients (b), standard error for the regression coefficients ($SE\ b$), the standardized regression coefficients (β) for each block, and the variance (R^2) for each block.

Table 4.7

Hierarchical Regression Coefficients for School Performance in Reading

Model		b	SE b	β
1	(Constant)	108.246		1.510
	Socioeconomic Status (SES)	-.727	.022	-.864
2	(Constant)	82.330	2.977	
	SES	-.721	.020	-.857
	Frequent Monitoring of Teaching and Learning (MTL)	.040	.108	.013
	Curriculum, Instruction and Assessment Aligned with Standards (CIA)	.623	.104	.219
3	(Constant)	78.593	3.349	
	SES	-.730	.020	-.868
	MTL	-.134	.127	-.045
	CIA	.412	.118	.145
	Clear and Shared Focus (CSF)	.367	.156	.092
	High Standards and Expectations for All (HSE)	-.005	.103	-.001
	Effective School Leadership (EL)	-.201	.080	-.091
	High Levels of Family and Community Engagement (PCI)	.086	.148	.022
	Supportive Learning Environment (SLE)	.231	.083	.123

Note¹: Model 1 $R^2 = .747$, Model 2 $R^2 = .800$, Model 3 $R^2 = .810$

Note²: $p < .05$

Model 1. Because SES, the measure of poverty (%age of students qualifying for free/reduced price meals) was determined to be a clear predictor of school performance in reading with a Pearson's r of $-.864$ ($p < .01$), it was selected as the independent variable for block

1. Results from this block indicated that block 1 was statistically significant in predicting school performance in reading, $F(1, 365) = 1079.497, p < .001$. Within the model, the R^2 value indicated that .747 or 75% of variance in school performance in reading could be explained by this variable.

Model 2. In this model, two independent variables, MTL and CIA, were added to SES from the first model. Results from this block indicated that block 2 as a whole was statistically significant in predicting school performance in reading, $F(3, 363) = 47.709, p < .001$ accounting for .800 or 80% of the variance in school reading performance. Within the model, SES ($\beta = -.857, p < .001$) and CIA ($\beta = .219, p < .001$) were the only individual significant predictors for school reading performance.

Model 3. In this model, five more variables were added to the second model to create the full model. Results indicated that the full model was statistically significant in predicting school performance in reading, $F(8, 358) = 3.40, p < .01$. As is evidenced in Table 4.7, within the model, SES, CIA, CSF, EL, and SLE were all significant, while MTL, HSE, and PCI were not. The R^2 value of .810 indicated that 81% of the variance in school performance in reading could be explained by the combination of variables in the full model.

Mathematics

A hierarchical regression analysis was conducted for the second dependent variable: school performance in mathematics. Table 4.8 reports the results for this regression analysis, including unstandardized regression coefficients (b), standard error for the regression coefficients (SE b), the standardized regression coefficients (β) for each block, and the variance (R^2) for each block.

Table 4.8

Hierarchical Regression Coefficients for School Performance in Mathematics

Model		b	SE b	β
1	(Constant)	108.905	1.844	
	SES	-.699	.027	-.804
2	(Constant)	80.556	3.176	
	Socioeconomic Status (SES)	-.691	.025	-.796
	Frequent Monitoring of Teaching and Learning (MTL)	-.221	.135	-.072
	Curriculum, Instruction and Assessment Aligned with Standards (CIA)	.874	.129	.298
3	(Constant)	80.788	4.225	
	SES	-.697	.026	-.802
	MTL	-.215	.160	-.070
	CIA	.762	.148	.259
	Clear and Shared Focus (CSF)	.314	.197	.076
	High Standards and Expectations for All (HSE)	-.212	.130	-.060
	Effective School Leadership (EL)	-.256	.101	-.112
	High Levels of Family and Community Engagement (PCI)	.133	.187	.032
	Supportive Learning Environment (SLE)	.142	.105	.073

Note¹: Model 1 $R^2 = .647$, Model 2 $R^2 = .708$, Model 3 $R^2 = .716$

Note²: $p < .05$

Model 1. As was the case with school performance in reading, because SES was determined to be a clear predictor of school performance in mathematics with a Pearson's r of $-.804$ ($p < .01$), it was selected as the independent variable for block 1. Results from this block

indicated that block 1 was statistically significant in predicting school performance in mathematics, $F(1, 365) = 668.307, p < .01$. Within the model, the R^2 value indicated that .647 or 65% of variance in school performance in mathematics could be explained by this variable.

Model 2. In this model, two independent variables, MTL and CIA, were added to SES from the first model. Results from this block indicated that block 2 as a whole was statistically significant in predicting school performance in mathematics, $F(2, 363) = 37.933, p < .01$, accounting for .708 or 71% of variance in school mathematics performance. Within the model, SES ($\beta = -.796, p < .001$), CIA ($\beta = -.796, p < .001$), and MTL ($\beta = -.072, p < .001$) were each individual predictors of school mathematics performance.

Model 3. In this model, five more variables were added to the second model to create the full model. Results indicated that the full model was statistically significant in predicting school performance in mathematics, $F(5, 358) = 2.044, p < .0010$. As is evidenced in Table 4.8, within the model, SES, MTL, CIA, CSF, HSE, EL, and SLE were all significant, while PCI was not. The R^2 value of .716 indicated that 72% of the variance in school performance in mathematics could be explained by the combination of variables in the full model.

Summary Answers to Research Questions

Each of the three research questions is answered in this section, applying the results from the data analyses presented in the previous sections of this chapter.

Research Question 1

What are the descriptive data for the participants in the dataset?

The sample consisted of teachers from 10 Iowa schools from 3A and 4A school districts, the largest in the state. Five of the schools were identified as low-performing (two elementary, two middle, and one high) and five were identified as high-performing (two elementary, two

middle, and one high). Poverty rates (% of students qualified for free/reduced price meals) ranged from 74.28% - 100% for the low-performing schools and from 33% - 60.3% for the high-performing schools. The percentage of students classified as English Language Learners for the low-performing schools ranged from 4% - 51%, while for high-performing schools the range was 1% - 30%. The student minority percentage for low-performing schools ranged from 45% to 98% and for high-performing schools the range was 16% - 53.2%. The range of the percentage of students classified as Special Education for low-performing schools was 12% - 24.15% and for high-performing schools the range was 8% - 15%. All five of the low-performing schools were classified as urban, while among the high-performing schools two were urban, two were rural, and one was suburban. Overall, the low-performing schools' students were poorer, more racially/ethnically diverse, more language diverse, and had more identified disabilities.

There were a total of 485 teachers from the ten subject schools. 367 completed the survey for a response rate of 75.67%. Descriptive statistics for demographic data, dependent and independent variables were calculated: minimum values, maximum values, means, and standard deviations. Percent proficient in reading, the first dependent variable, had a minimum value of 36.36, a maximum value of 88.71, mean of 60.67 with a standard deviation of 16.23. The descriptive statistics for the second variable were similar, with the following values: percent proficient in mathematics, the second dependent variables, had a minimum value of 27.27 and a maximum of 87.09, with a mean of 63.18 and a standard deviation of 16.76. The independent variable % qualified for free/reduced price meals (proxy measure for poverty or low socio-economic status) had a minimum value of 33.00 and a maximum value of 100.00 with a mean of 66.44 and a standard deviation of 19.30. The last nine independent variables were measures of the Nine Characteristics of High-Performing Schools. Of note was a minimum value greater than

13 for four of the variables: C (22), CIA (19), FPD (21), and SLE (29). Additionally, SLE had a maximum value of 75, 17 higher than the next highest maximum value of 58. SLE also had the highest mean (57.61) and the highest standard deviation (8.599). The four variables with the lowest mean values also had the lowest standard deviation values.

Research Question 2

To what extent is there a difference between high-performing and low-performing schools for each of the Nine Characteristics of High-Performing Schools?

There was a statistically significant difference between high-performing and low-performing schools for five of the Nine Characteristics of High-Performing Schools. The Independent Samples t-tests indicated that high-performing schools had a stronger focus (as indicated by higher means) than low-performing schools for Effective School Leadership (EL); High Levels of Collaboration and Communication (C); Curriculum, Instruction, and Assessment Aligned with Standards (CIA); Focused Professional Development (FPD); and High Levels of Family and Community Involvement (PCI).

Research Question 3

To what extent do socioeconomic status and the Nine Characteristics of High-Performing Schools predict school performance for a) reading proficiency, and b) mathematics proficiency?

School performance in reading. The regression analysis indicated that socioeconomic status and Classroom Practices (Curriculum, Instruction, and Assessment Aligned with Standards, and Frequent Monitoring of Teaching and Learning) was a statistically significant predictor of school performance in reading. The regression analysis also revealed that School Conditions (Clear and Shared Focus; High Standards and Expectations for All Students; Effective School Leadership; Supportive Learning Environment; and High Levels of Family and

Community Involvement) increased the statistical significance of predictability of school performance in reading. The addition of School Conditions to SES and Classroom Practices increased the predictability of school performance in reading from 80% to 81%.

School performance in mathematics. The regression analysis indicated that socioeconomic status and Classroom Practices (Curriculum, Instruction, and Assessment Aligned with Standards, and Frequent Monitoring of Teaching and Learning) was a statistically significant predictor of school performance in mathematics. The regression analysis also revealed that School Conditions (Clear and Shared Focus; High Standards and Expectations for All Students; Effective School Leadership; Supportive Learning Environment; and High Levels of Family and Community Involvement) increased the statistical significance of predictability of school performance in mathematics. The addition of School Conditions to SES and Classroom Practices increased the predictability of school performance in mathematics from 71% to 72%.

The combination of the Nine Characteristics of High-Performing Schools analyzed in this study proved to be predictive of school performance in both reading and mathematics, with a higher level of predictive value for school performance in reading.

Summary

This chapter provided the results of the research data analysis methods described in Chapter 3. The analysis of data for normality indicated that assumptions of normality were met for each variable. A total of 51 of the 66 correlations were found to be statistically significant when applying the Bonferonni adjustment. Descriptive statistics for participants in the study were presented, followed by the results of the hierarchical progressions. Results indicate that when adjusting for poverty rate, both Classroom Practices and School Conditions were significant predictors of school performance in both reading and mathematics. Additionally, five

of the nine characteristics of high-performing schools were significant predictors of school performance. Chapter 5 provides a discussion of the results of the study; education policy and practice implications; and recommendations for future research.

CHAPTER 5

DISCUSSION, CONCLUSIONS, AND IMPLICATIONS

This chapter provides a discussion of the results presented in chapter 4, informed by current literature. The chapter begins with a summary of the study, followed by a discussion of the results, implications for education policy and practice, and recommendations for future research.

Summary of the Study

Chapter 1 provided an overview of the problem of persistent achievement gaps between Caucasian students from families of middle-income and students from poverty, that are non-native English speakers, have a disability, or belong to a racial or ethnic minority, and the relatively flat trends of student achievement in mathematics and reading over the last fifteen years in the face of increases in the student populations with the poorest academic performance. The context of the K-12 education system in Iowa was described, followed by a discussion of the factors that most impact student achievement, both inside of and outside a school's sphere of influence, and The Nine Characteristics of High-Performing Schools were introduced. Chapter 1 concluded with an explanation of the significance of the study and a definition of key terms and acronyms.

Chapter 2 provided an overview of past and current literature and research addressing school improvement, organizational change, and the Nine Characteristics of High-Performing Schools. The chapter concluded with a brief discussion of the utility of measuring teacher perceptions of school culture to inform school improvement efforts and accelerate improvement in student performance and school effectiveness.

In Chapter 3 the research design and methodological approach used in this study was provided, including the research questions that drove the study and a description of the research setting, sample, participants and survey instrument. The two dependent and ten independent variables were discussed, followed by the plan for conducting the correlation and hierarchical regression analyses. Finally, explanations of the delimitations and limitations of the study were included.

Chapter 4 provided the results of the analyses explained in chapter three. The methods used for data screening and the establishment of assumptions of normality were shared as were the frequency and descriptive statistics. Next was a presentation of the correlation of variables followed by the results of the regression analyses for the dependent variables: school performance in reading and school performance in mathematics. The answers to the three research questions were presented at the end of the chapter.

The following sections of this chapter (Chapter 5) discuss the results of this study, implications for education policy and practice and recommendations for future research.

Discussion of the Results

In his review of literature on the essential practices of high quality teaching and learning, MacGregor (2007) observed:

Strategic planning, education reform and school and district improvement have been the common strategies utilized in schools and districts across the land. While these efforts achieved some of the desired results, e.g. schools with vision and mission statements, data-driven organizations, and professional development aligned with goals, there has been little systemic effort to directly impact the teaching and learning occurring in classrooms. If we are to improve all schools, as measured by improved student

performance, we must craft improvement strategies that directly impact what happens in the teaching and learning environment (p. 4).

The notion that teachers are at the center of school improvement efforts was at the heart of this study. Despite myriad approaches to school improvement in state and federal policy and individual school districts, sustained improvement in student results has not become a widespread reality. Hattie (2009) and others have demonstrated that teacher quality accounts for the largest proportion of variance in student achievement for factors understood to be within a school's sphere of influence. In this study, teacher perceptions of the Nine Characteristics of High-Performing Schools were tied to school performance in reading and mathematics. If teachers have the greatest in-school impact on student performance, then measuring their perception of the conditions needed for high performance can inform where schools can best direct their school improvement efforts to accelerate student achievement.

The goal of this study was to determine if teachers' perceptions of the Nine Characteristics of High-Performing Schools would predict school performance in reading and mathematics. The results showed that there was a significant difference between high-performing and low-performing schools for five of the nine characteristics: Effective School Leadership (EL); High Levels of Collaboration and Communication (C); Curriculum, Instruction, and Assessment Aligned with Standards (CIA); Focused Professional Development (FPD); and High Levels of Family and Community Involvement (PCI). Further, when adjusting for low socioeconomic status, Classroom Practices (a combination of two characteristics of the nine characteristics: Frequent Monitoring of Teaching and Learning (MTL) and Curriculum, Instruction, and Assessment Aligned with Standards (CIA)) predicted school performance in both reading and mathematics at a significant level. Finally, when a second combination of

variables was introduced to the regression model, School Conditions (a combination of five of the nine characteristics: Clear and Shared Focus; High Standards and Expectations for All; Effective School Leadership; High Levels of Family and Community Involvement; and Supportive Learning Environment) the significance level of predicting school performance in reading and mathematics increased, with a higher level of predictive value in reading than for mathematics.

Due to concerns with multicollinearity, two of the independent variables – High Levels of Communication and Collaboration and Focused Professional Development – were not included in the regression analysis, although both of these variables were demonstrated to have significant variance between low-performing and high-performing schools.

Conclusions

This study sought to determine if teacher perceptions of the nine characteristics of high-performing schools would predict school performance in reading and mathematics. The research base supporting the Nine Characteristics of High-Performing Schools is well documented, though states and districts often do not strategically capture teacher perception data to inform school improvement efforts. This study included ten schools from the state of Iowa. The discussion of implications for policy and practice will refer, in part, to a matched sample of schools from the state of Washington, where schools regularly collect teacher perceptions of the Nine Characteristics of High-Performing Schools. As evidenced by the results of this study, teacher perceptions of the Nine Characteristics of High-Performing schools have predictive value relative to school performance in reading and mathematics.

Implications for Policy and Practice

NCLB and the AYP calculations use year-to-year results for the “percentage of students meeting standard” and “safe harbor” calculations. Since 2004, CEE has used an alternative model based on the Reading and Math Level Indices (RLI and MLI) to help school and district teams understand their improvement over multiple years. The RLI and MLI definition dates back to Washington’s Commission on Student Learning and the A+ Commission and were used in 1997-2001 to determine building-level improvement targets (i.e., before NCLB). The strength of these indices is that they represent the performance of “all students” in the building, not simply those “meeting standard” (Lobdell, 2009, p. 6).

Measuring the percentage of its students “meeting standard” does not measure the effectiveness of a school. Arguably, the need for information to inform efforts at accelerating growth for those students not meeting standard would have more utility in informing efforts at school improvement. A school with a lower percentage of students meeting standard may be adding more value than a school with a higher percentage of students meeting standard if the students at the respective schools require different rates of growth to meet standard. Likewise, if students begin the year at or above standard, measuring percent proficient as a measure of school quality will not include growth in those students already achieving at the minimum level.

With very few exceptions, schools identified as Persistently Lowest Achieving and In Need of Assistance in the state of Iowa reflects the list of the schools with the most disadvantaged student populations. Educators in schools with these challenging populations can easily become discouraged and students and families may form a negative opinion of their school, regardless of how well their students are progressing. When selecting the subjects for this

study, the researcher found a list of schools identified as low-achieving. However, the search for high-performing schools was much more challenging since the state does not have a method for recognizing high-performing schools. The researcher had difficulty in creating a method of identifying high-performing schools because of limited and inadequate data on student progress collected by the state. Ultimately, if the information used to inform improvement efforts provide data that explain proficiency rates and not growth, the data are inadequate to use as a basis for improvement plans and further, are inadequate to make a determination of a school's effectiveness.

The need to improve student performance in public schools is more urgent now than ever. The employment options for high school dropouts are extremely limited and the job categories that offer a growth in opportunities for earning a living wage require at least a high school diploma and some post-secondary training (Iowa Workforce Development, 2013).

Additionally, there are tremendous societal impacts resulting from students dropping out of high school or graduating unprepared for a career or for college. This is reflected in employment and incarceration rates of high school dropouts and for high school graduates and those that attend college. Figure 5.1 illustrates the relationship of educational attainment and employment rates for 16 – 24 year old out-of-school youth and Figure 5.2 illustrates the percentage of 16-24 year olds who were institutionalized by school enrollment and educational attainment.

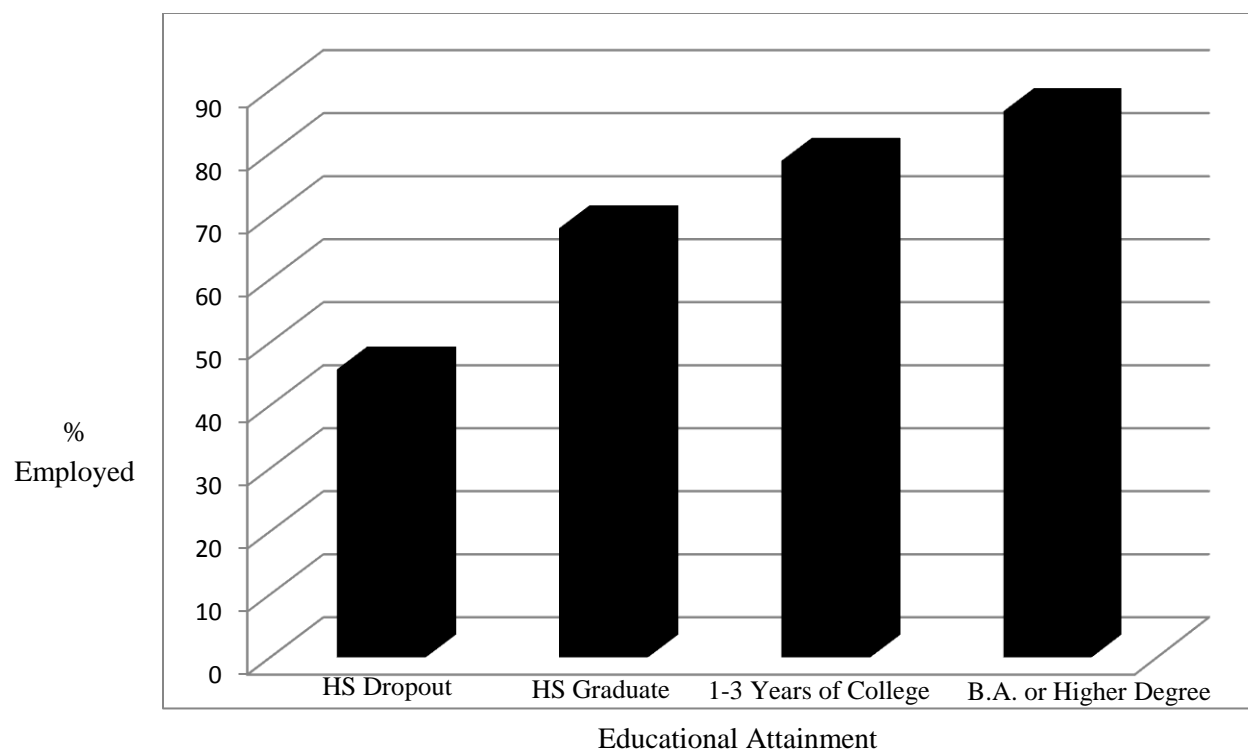


Figure 5.1. Employment Rates of 16-24 Year Old Out-of-School Youth in the US by Educational Attainment, (2008)

(Sum, Khatiwada, McLaughlin, & Palma, 2009, p.3)

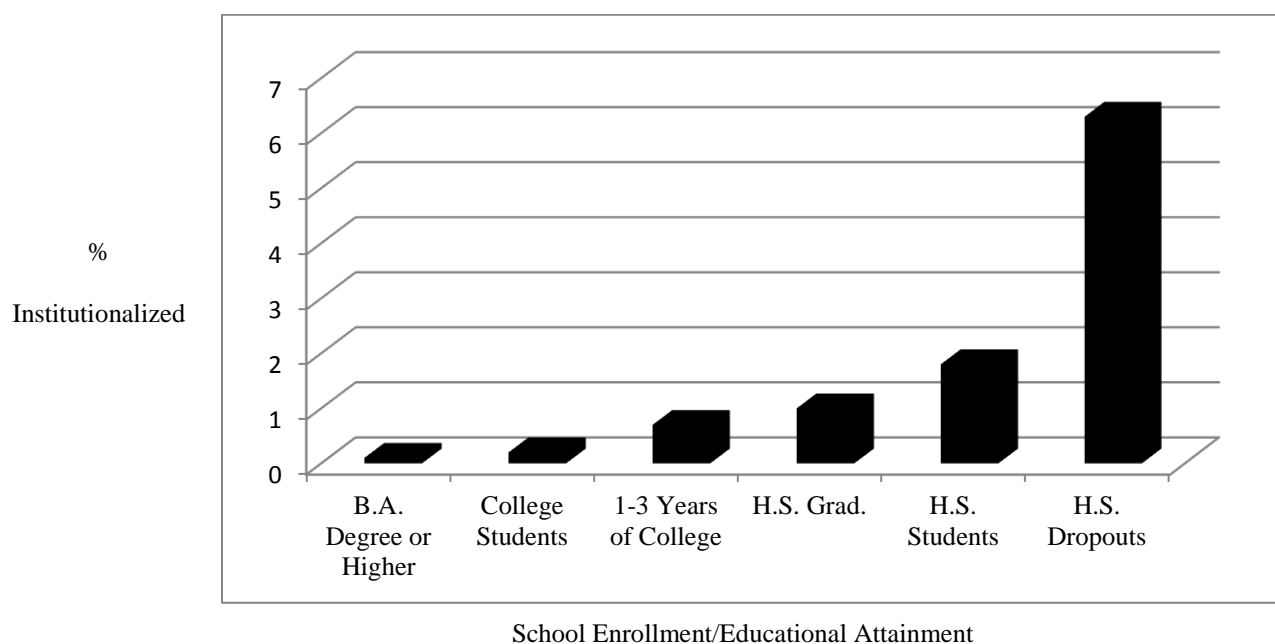


Figure 5.2. Percent of 16-24 Year Olds Who Were Institutionalized in 2006-2007 by School Enrollment/Educational Attainment

(Sum, Khatiwada, McLaughlin, & Palma, 2009, p.9)

For a number of reasons, the state of Iowa should consider the use of a test or tests that are designed to measure student growth on state standards. The investment that is annually made to collect Iowa Assessments data from each district in the state is in the millions of dollars in materials and staff time, not to mention a considerable loss of instructional time. This investment, however, does very little to inform educators' ability to measure their effectiveness in improving student achievement. Additionally, the results of this assessment can misinform the school and the community it serves, including students and families, as to the school's effectiveness. Although proficiency is an important measure, it is a grossly inadequate measure of telling the story of a school's effectiveness in terms of student learning.

Another opportunity for policy makers is to advocate for the use of teacher perception data on school culture to inform district and building level school improvement planning. Even the best assessments are not adequate to fully inform district leaders about where school improvement investments can be best leveraged. As this study suggested, teacher perceptions of school culture, as defined by the Nine Characteristics of High-Performing Schools, are predictive of school performance in reading and mathematics. Collecting and analyzing teacher perception data is relatively inexpensive when compared with comprehensive testing of all students, and it can provide valuable information about where improvement efforts should be focused to impact student learning. This is not to suggest that students should not be tested on a common measure; however, as the key factor influencing student learning, teacher input is crucial to the effectiveness of school improvement efforts.

Finally, regardless of state policy, district leaders should consider the utility of measuring the conditions in their schools by collecting teacher perception data in their school improvement planning. There are always more priorities to address than resources allow. Including teacher

perception data in the planning process will help decision makers understand where they are likely to receive the best return on their investment in improvement efforts. Additionally, though not addressed in this study, the perceptions of administrators, school support staff, students, family and community members could provide additional useful data to inform school improvement efforts.

Recommendations for Future Research

This study examined teacher perceptions from ten schools in Iowa. Given the limited data available on student performance at the state level and the relatively small size of the sample, further research is needed to confirm the results of this study. Further, because of the limitations in this study's identification of high-performing schools, research that includes schools from a state that has a criterion-referenced growth measure is also recommended.

Two of the ten independent variables - High Levels of Communication and Collaboration and Focused Professional Development - included in this study were excluded from the hierarchical regression analysis, despite having been shown to be significant predictors of student performance when measured independently. The body of research supporting these two characteristics of high-performing schools is well-developed. Future research including these two factors as part of a regression analyses would create a more complete understanding of their impact on predicting school performance.

This study included grouping seven characteristics of high-performing schools into two categories: Classroom Practices (Curriculum, Instruction, and Assessment Aligned with Standards and Frequent Monitoring of Teaching and Learning) and School Conditions (Clear and Shared Focus; High Standards and Expectations for All; Effective School Leadership; High Levels of Family and Community Involvement; and Supportive Learning Environment). The

results of the study indicated that these combinations of variables have predictive value for school performance in reading and mathematics, other combinations of the variables could be defended and should be explored in future research.

Final Thoughts

The teacher in the classroom is the fundamental unit of production in public schools. In order for sustained improvement to occur in schools, teachers must be engaged in a meaningful way. The collective conviction of teachers needed to make necessary change requires a change in attitudes and belief. If the current reality is accepted, individuals are more likely to change their belief about the need for change. They need to own it. It has been demonstrated in this study and elsewhere that teacher perceptions of school conditions can be predictive of school performance. The exercise of intentionally collecting teacher perceptions in and of itself causes teachers to reflect. When teachers reflect on their own practice and the conditions in their classroom, school and district context, the data that results is powerful because it is personal and it honors individual teachers and their unique context.

When we share experiences and learn from each other, it stimulates the imagination and nudges us in a new direction. Reflection then enhances a sense of what is possible and enlarges our repertoire of potential strategies for improved student learning.

At the same time a limitation emerges when learning from others: no two schools are exactly the same. A simple imitation of another school's strategies may not work. The transfer of ideas must be viewed in the context of a school. (Derrington, 2009, p. 1)

APPENDIX A

The Center for Educational Effectiveness Staff Survey, version 8.0, which was used to collect perception data from teachers in both the Iowa sample schools and the Washington sample schools is provided in this section.

Educational Effectiveness Survey - EES

Characteristics of High Performing Schools

Certificated and Classified Staff Edition

Within any school there are behaviors, practices and characteristics that impact student learning and the overall performance of the school. To change or improve, it is first necessary to understand the current reality or culture of your school and what staff members are experiencing. Your perceptions will provide information to begin conversations, focus resources and support school improvement decisions. The results of this survey are formative in nature. Individual surveys are confidential and will not return to this school or district.



Please focus your responses on the current environment of this school.

Marking Instructions

- * Use a pen or a pencil
- * Make solid marks that fill in the response completely
- * Erase cleanly any marks you wish to change
- * Leave BLANK any questions you don't have an opinion on



CORRECT:

Think about the following statements and decide to what degree you think each statement is **ALMOST ALWAYS TRUE, OFTEN TRUE, SOMETIMES TRUE, SELDOM TRUE, or ALMOST NEVER TRUE** in this school. Please leave blank any question you do not have an opinion on.

	Almost Always True	Often True	Sometimes True	Seldom True	Almost Never True
Important decisions here are based on the mission/purpose of this school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a willingness to address conflict in this school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a good or best friend at work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is someone at work that I confide in	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I actively participate in the evaluation of my performance objectives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During tough times, administrators do everything they can to keep people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I welcome new and innovative ideas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When there is a problem in my school, we talk about how to solve it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal is committed to quality education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our staff are willing to work at changing this school for the better	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our staff shares learnings from conferences and seminars they attend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know what is expected in terms of my work performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand the mission/purpose of our school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff at this school collaborate to improve student learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We are frequently informed about how well we are doing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Confidential information is carefully guarded in this school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff at all levels are treated fairly here	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This school encourages parent involvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This school provides curriculum that is relevant and meaningful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our staff can count on one another for help when needed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our teachers effectively communicate student progress to parents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Almost Always True	Often True	Sometimes True	Seldom True	Almost Never True
This school is orderly and supports learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The training I have been to in this district helps me do my job better	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This school has activities to celebrate the cultures of its community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are people here who care about me as a person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collaboration between district and schools is based upon trust & respect	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am comfortable with presenting new ideas to my principal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am encouraged to learn and grow in my school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This school provides opportunities for each child to have an adult advocate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students understand the expectations and standards of this school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our staff welcomes new and innovative ideas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In my job, my best skills and talents are being utilized	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal (or administrator) talks to me about my professional development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff I work with demonstrate commitment to our mission	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Appropriate data are used to guide building-directed professional development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal cares about me as a person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We honor agreements made with each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff I work with demonstrate commitment to quality education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We are provided with training to collaborate on improving student learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
District administrators communicate a clear vision of good instruction and essential curriculum	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We have opportunities to learn effective teaching strategies for the cultures represented in our school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thanks for your thoughtfulness in completing this survey!

Students in this school are engaged in learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal has a student-learning focus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal is comfortable presenting new ideas to the staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff in our school are consistently truthful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal/administrator involves me in determining my performance goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resources are allocated based on the mission/purpose of this school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal facilitates systems/processes to support school improvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am willing to work at changing my school for the better	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My work contributes to the mission/purpose of this school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My principal listens to my ideas and concerns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
With important decisions we collaborate with parents and the community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I talk with my principal/administrator about progress on performance goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I receive recognition or praise for a job well done	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My performance goals are set based on the mission/purpose of this school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parents & community understand the expectations & standards of this school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The mission/vision of this school and district are aligned with each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This school has a data-driven school improvement plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is a consistent vision of school improvement throughout this district	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This district facilitates systems and processes to support school improvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is effective, 2-way communication between the district and our school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
District administrators demonstrate commitment to improved student learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Almost Always True	Often True	Sometimes True	Seldom True	Almost Never True
I understand the reasons behind the allocation of resources in this district	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improvement efforts of this school are supported by district administrators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This school communicates effectively to families of all cultures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The curriculum we teach reflects the cultures of the community we serve	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This district actively cultivates partnerships to enhance student learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We have a system for celebrating student success	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our school meets regularly to monitor implementation of our school improvement plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assessment data is used to identify student needs and appropriate instructional intervention	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our teachers engage in classroom-based professional development activities (e.g. peer coaching) that focus on improving instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe that all students can meet state reading standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We collaboratively plan the integration of literacy & numeracy concepts across the curriculum	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our staff demonstrates a thorough understanding of state learning standards for reading	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The reading program we teach is aligned with state learning standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Struggling students receive early intervention and remediation to acquire skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff in our school do not manipulate others to achieve their goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I demonstrate a thorough understanding of state learning standards for reading	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our staff believes that all students can meet state reading standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our teachers engage in professional development activities to learn and apply reading skills and strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Your perceptions, when recorded, become important data that will be used to inform conversations and decisions about school improvement.

I believe that all students can meet state math standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our staff will "go the extra mile" for others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our teachers engage in professional development activities to learn and apply math skills and strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This district provides training/skill development in cultural responsiveness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This district provides resources to support data-driven teaching and learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our staff believes that all students can meet state math standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I demonstrate a thorough understanding of state learning standards for math	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
All teachers integrate literacy and numeracy concepts into their teaching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our staff demonstrates a thorough understanding of state learning standards for math	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The math program we teach is aligned with the state learning standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand and apply concepts of cultural responsiveness in my daily work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This district encourages and welcomes community and parent involvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This district supports effective classroom practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This district uses assessments aligned to standards and instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
District and building professional development activities complement each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Turn page for last 5 questions and important demographics! Thank you.

	Almost Always True	Often True	Sometimes True	Seldom True	Almost Never True
When staff members participate in cultural celebrations, they are respected and supported	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This school reviews and addresses issues of cultural responsiveness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We hold one another accountable for behavior that is culturally sensitive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This district facilitates the alignment of curriculum across grades and schools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff in this school can depend on one another	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The perceptual and demographic data from this survey will be used to inform and support your school improvement planning and contribute to action-based research on school improvement.

What is your position in this school?

☐ Certificated Teacher

☐ Certificated Support Staff

☐ Classified Support Staff

☐ Administrator - School

☐ Administrator - District

☐ Para-professional/Instr Aid

How long have you been with this school?

☐ Less than 1 year

☐ 1 to 3 years

☐ 4 to 5 years

☐ 6 to 10 years

☐ 11 to 15 years

☐ More than 15 years

Your primary department assignment? (Indicate one only)

☐ Math / Science

☐ Lang. Arts / Social Studies

☐ Electives

☐ Generalist K-3

☐ Generalist 4-6

☐ Other

Name of This School?

How long have you been in education?

☐ Less than 1 year

☐ 1 to 3 years

☐ 4 to 5 years

☐ 6 to 10 years

☐ 11 to 15 years

☐ More than 15 years

What is your gender?

☐ Male

☐ Female

What level of school (or students) do you primarily work with?

☐ Elementary

☐ Middle School

☐ Junior High

☐ High School

What is your ethnicity?

☐ African-American

☐ American Indian/Alaskan Native

☐ Asian/Pacific Islander

☐ Hispanic (Latino/a)

☐ White-Caucasian

☐ Multi-racial

☐ Other

THANK YOU FOR YOUR TIME!

Please fold and seal this survey in the envelope. This survey will not return to your school.

APPENDIX B

Demographic Characteristics of Subject Schools
(figures are from 2009-2010 school year)

Low-Performing Schools

School	Grades Served	Enrollment	% Low SES	% ELL	% Minority	% SPED	Type
A	K – 5	310	92.00	4.00	65.00	17.60	Urban
B	K – 5	252	100.00	51.00	98.00	12.00	Urban
C	6 – 8	656	76.10	24.54	66.31	16.77	Urban
D	6 – 8	579	81.50	20.00	45.00	20.00	Urban
E	9 – 12	1085	74.28	23.41	58.70	24.15	Urban

High-Performing Schools

School	Grades Served	Enrollment	% Low SES	% ELL	% Minority	% SPED	Type
F	K – 5	438	60.30	30.00	53.20	9.00	Urban
G	K – 5	488	33.00	1.00	16.00	8.00	Suburban
H	6 – 8	592	47.83	10.40	32.00	13.00	Urban
I	6 – 8	600	48.58	20.00	29.00	15.00	Rural
J	9 – 12	1356	45.00	6.00	22.00	14.00	Rural

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